NEAR-DEATH EXPERIENCES AND OUT-OF-BODY EXPERIENCES

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Head Truth

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Tuesday, July 15, 2025

Physically Unrealistic NEPTUNE "Model" of Near-Death Experiences Is a Misleading Mishmash

I was previously asked by some of my readers for comments on the paper "A Neuroscientific Model of Near-Death Experiences." At that time I did not critique the paper because it was behind a paywall, and the abstract gave no reason for suspecting that the paper was worth a 20 dollar payment. The paper is now publicly available at the link here (alternate link here). We have a paper that claims to have a "model" of near-death experiences, but actually offers no physically realistic model of any such thing. What we get is a jargon-filled jumble that does nothing to explain any of the main features of near-death experiences. The abstract gives a clue of the hodgepodge farrago that the paper is, by saying that it will offer "a model for NDEs that encompasses a cascade of concomitant psychological and neurophysiological processes within an evolutionary framework." So the strategy is apparently something like: let's sprinkle some psychology talk with some brain chemistry talk and some Darwinist evolutionary biology talk, and see whether that adds up to an explanation for near-death experiences. The result resembles someone wildly firing shots in all different directions.

The co-authors start out by giving us a three-paragraph discussion entitled "Cerebral blood flow, blood gases and neuronal function." Here is the first paragraph:

"Just before and during cardiopulmonary arrest, cerebral blood flow is compromised, resulting in a swift decline in oxygen and glucose supplies and an accumulation of CO2. Oxygen deprivation (hypoxia) impairs cellular respiration and ATP production, thereby disrupting energy-dependent cellular processes. This deprivation also affects the function of enzymes such as monoamine oxidase (MAO), which is responsible for degrading monoamine neurotransmitters, including serotonin, dopamine, noradrenaline and histamine. In addition, elevated CO2 levels (hypercapnia) contribute to acid–base imbalance. CO2 combines with water to form carbonic acid (H2CO3), which dissociates into H+ and HCO3 – ions. During hypercapnia, the buffering capacity of HCO3 – is exceeded by an overabundance of H+ , leading to decreased pH43, disrupted ATP production, and cerebral acidosis. Reductions in brain pH activate acid-sensing ion channels (ASICs), leading to an influx of Na+ ions, which further contributes to neuronal depolarization and the triggering of action potentials."

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We have lots of mention of chemistry details, a jargon-filled discussion that is meant to impress us. But it should not impress us in the least, because it has no relevance to explaining near-death experiences. There is one main relevant neuroscience-related fact here (which the paper fails to ever mention). It is that very soon after the heart stops beating during cardiac arrest, the brain shuts down electrically. This is shown in EEG readings, which show the brain flatlining within 10 to 20 seconds after cardiac arrest. When this flatlining of brain signals occurs, the normal wavy appearance of brain waves become flat lines.

The term "isoelectric" or iso-electric in reference to brain waves means a flat-lining equivalent to no electrical activity in the brain, as measured by EEG readings. The paper here states, "Within 10 to 40 seconds after circulatory arrest the EEG becomes iso-electric." Figure 1 of the paper here says that such an isoelectric flat-lining occurred within 26 seconds after the start of ventricular fibrillation, the "V-fib" that is a common cause of sudden cardiac death, with "cortical activity absent." Also referring to a flat-lining of brain waves meaning a stopping of brain electrical activity, another scientific paper says, "several studies have shown that EEG becomes isoelectric within 15 s [seconds] after ischemia [heart stopping] without a significant decrease in ATP level (Naritomi et al., 1988; Alger et al., 1989)." Another paper tells us this about brain waves and infarction (obstruction of blood flow), using CBF to mean cerebral blood flow, and the phrase "the EEG becomes isoelectric" to mean a flat-lining of brain electrical signals:

"*When normal CBF declines, the EEG first loses the higher frequencies (alpha and beta bands), while the lower frequencies (delta and theta bands) gradually increase. When the CBF decreases further towards an infarction threshold, the EEG becomes isoelectric."*

Similarly, another paper refers to blood pressure, and tells us, "When flow is below 20 mL/100 g/min (60% below normal), EEG becomes isoelectric." meaning that brain electrical activity flat-lines. The 85-page "Cerebral Protection" document here states, "During cardiac arrest, the EEG becomes isoelectric within 20-30 sec and this persists for several minutes after resuscitation." Another scientific paper states this:

"Of importance, during cardiac arrest, chest compliance is not confounded by muscle activity. The EEG becomes isoelectric within 15 to 20 seconds, and the patient becomes flaccid (Clark, 1992; Bang, 2003)."

For example, below is part of Figure S1A from the supplemental information of a scientific paper. We see the brain waves of a dying Patient One in blue (EEG readings), and we see in the last row a red ECG reading that is a measure of heart activity.

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- The Brain Seems to Have No Mechanism for Reading or Writing Memories
- No One Understands How a Brain Could Generate Ideas
- Prevailing Brain Dogmas Cannot Explain Hypnotic Phenomena
- 30 Reasons for Rejecting the Theory of Neural Memory Storage
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- Neuroscience Research Customs Guarantee an Abundance of Junk Science
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- The Social Construction of Eager Community Mirages
- Preprint Server Counts Suggest Engrams Are Not Really Science
- Engrams Are Touted Like Phlogiston Was Once Touted
- Synaptic Delays Mean Brain Signals Must Move at a Snail's Pace
- Raven Smarts Defy Prevailing Brain Dogmas
- No One Can Credibly Explain Why a Brain Would Store a Memory in One Specific Spot
- Brain Dogmas Versus Case Histories That Refute Them
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- Young Age of Languages Contradicts Claims of Neural Storage of Linguistic Information
- Vacillating Disarray of the Memory Trace Theorists
- Study Finds "Poor Overall Reliability" of Brain Scanning Studies
- "Brains Store Memories" Dogma Versus the Reality of Noisy Brains
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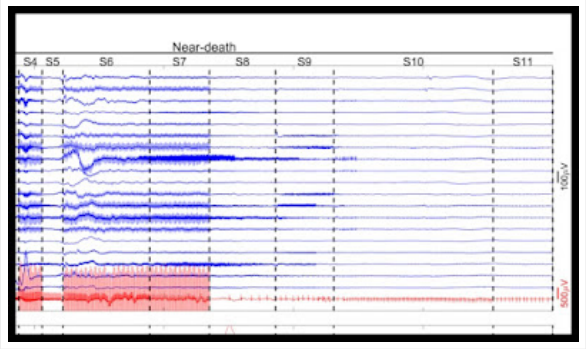

The text below this visual tells us this about these stages that are labeled S5, S6, S7, S8, S9 and S10, using the term "bradycardia" which means lower-than-normal heart rate:

"The pacemaker was automatically turned off (S5) and restarted from S6. S7 starts when rapid heartrate drop was seen which ended when pacemaker was turned off by clinical staff. S8 denotes the bradycardia period where RR interval (RRI) is longer than 5s. In S9, RRI is below 5s (partial heartrate recovery). S10 saw the reappearance of the P-waves and further recovery of heartrate. S11 ends at the last recorded heartbeat with periodical PAC-like ECG pattern."

The evidence in this case is clear: there was virtually no brain activity at stage S10 (when there was "further recovery of heartrate") and no brain activity at all at stage S11, which ended with the "last recorded heartbeat." The lack of brain activity is shown in the blue flat lines we see under S10 and S11.

The fact of the brain flatlining and becoming isoelectric within about 10 to 20 seconds of cardiac arrest is an all-important fact in any neuroscience attempt to explain near-death experiences. It means that all such attempts are doomed to failure. There can be no brain explanation of some mental phenomenon if that phenomenon occurs when the brain is electrically inactive. Similarly, you can have no explanation of your computer performing some task if the task occurred while your computer was unplugged and your computer has no batteries.

Does the paper "A Neuroscientific Model of Near-Death Experiences" ever tell us this all-important fact that brains become isoelectric (electrically inactive) within a few seconds after cardiac arrest? No, it does not. The paper does not use the word "isoelectric" and does not use the word "flatline." The paper makes no reference to EEG readings, and no reference to brain waves. The text of the paper fails to use the term "EEG" and fails to use the term "brain wave." So the paper's pretensions to be describing what goes on in a brain during cardiac arrest is a sham. The authors have ignored the most fundamental reality of what goes on in a brain during cardiac arrest.

The vast majority of the paper "A Neuroscientific Model of Near-Death Experiences" is a discussion of brain chemicals. Before reviewing this discussion I can give some background information on that topic. The main chemicals the paper discusses are serotonin, glutamate, noradrenaline, acetylcholine, endorphins, dopamine and GABA. These chemicals are found in extremely tiny amounts such as 1 part per million in brain fluid. Prior to the past few years, there did not exist any reliable

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- Gender Differences in Brains Help Discredit Prevailing Dogmas About Brains
- Study Finds Equal Brain Connectivity in All Mammals
- Some Reasons the Main Theory of Neural Memory Storage Is Unbelievable
- Scientists Can't Persuasively Explain How a Brain Could Instantly Retrieve a Memory
- The Lack of Evidence for Memory-Storage Engram Cells
- Candid Confessions of the Cognition Experts
- Global Workspace Theory Sure Isn't an Explanation for Consciousness
- When Animals Cast Doubt on Dogmas About Brains
- Memories Can Form Many Times Faster Than the Speed of Synapse Strengthening
- The Guy with the Smallest Brain Had the Highest IQ
- He Had Half a Brain and Above Normal Intelligence
- The Truth About Neurons and Synapses
- A Diagram of Explanatory Dysfunction in Academia
- The Brain Shows No Sign of Working Harder During Thinking or Recall
- More Evidence of High Mental Function Despite Large Brain Damage
- The Lack of a Viable Theory of Neural Memory Encoding
- More Evidence That Neuron Loss Has Little Effect on Cognition
- Fraud and Misconduct Are Not Very Rare in Biology
- Reasons for Doubting Thought Comes from the Frontal Lobes or Prefrontal Cortex
- Why Most Animal Memory Experiments Tell Us Nothing About Human Memory
- Other Evidence of Human Paranormal Abilities

method for accurately measuring increases in such chemicals occurring over a very short time span such as the few minutes following the beginning of cardiac arrest. There existed a technique called microdialysis, which involved inserting a needle or tube into the brain, and taking fluid from some tiny part of it. Such a technique was not suitable for reliably tracking changes in brain chemicals over a short period. Someone might try to insert such microdialysis needles three times in quick succession over a period such as ten minutes, and then analyze the extracted fluid. But any differences reported would be more likely to be due to region-to-region variations in such chemicals, or uncertainties in the attempted measurements themselves, rather than an actual increase over the short time span. The identification of chemicals existing in only extremely tiny trace amounts is an affair involving large chances for error, with uncertainties often spanning several orders of magnitude, between 10 and 1000 times. For example, the paper here lists studies that attempted to measure one brain chemical by using microdialysis, and the reported results vary between 1 nanomole and 2000 nanomoles.

Whenever we hear any claims that some brain chemical was found to increase during ischemia (the blockage of blood to the brain), we should always ask questions such as these:

(1) How many studies reported such an effect, and were the study group sizes used sufficient to produce a high statistical power?

(2) What fraction of the brain was checked? Was it only a hundredth of the brain, such as only the striatum or the hippocampus?

(3) What was the time scale? Was it over hours or days (irrelevant for discussions of near-death experiences), or was it over some very short time scale that might be relevant to explaining something going during cardiac arrest or near-death experiences?

Almost always the answers to these questions will deflate any claims to have found a relevant surge in brain chemicals, showing that the claims are not well founded and not well replicated.

Here are some of the sections in the paper "A Neuroscientific Model of Near-Death Experiences":

- **The section entitled "the serotonergic system."** We have eight paragraphs describing the role of serotonin in the brain. None of the discussion has any relevance to explaining any of the more interesting features of near-death experiences. Serotonin does not produce hallucinations. The paper "Serotonin and Human Cognitive Performance" discusses the results of "experimental studies involving healthy human volunteers," but makes no mention of hallucinations in these volunteers who had their serotonin levels artificially increased. Millions of people in the US take SSRI drugs that are specifically designed to increase serotonin levels; but such drugs do not produce hallucinations. The paper here (discussed in the appendix) involved experiments that increased by very many times (between 100 times and 1000 times, in other words 10000% to 100000%) the serotonin levels in volunteers, by infusions of serotonin. No hallucinations were reported. There is no robust evidence that serotonin surges in humans during near-death experiences or during cardiac arrest.

- Why Brains Are Not Suitable for Storing Long Sequences Like Humans Remember
- Why Brain Scans Don't Show Brains Make Minds
- Why Strokes, Alzheimer's Disease and Drunkenness Don't Prove the "Brains Make Minds" Dogma
- Synaptic Density Studies Contradict the Most Popular Memory Theory
- The Rare "Total Recall" Effect That Conflicts with Brain Dogmas
- Physical Connections Do Nothing to Explain Cognition
- The Sociological Reasons Why Bad Explanations Persist in Academia
- Split-Brain Cases Conflict with "Brains Make Minds" Dogma
- Why So Much of Neuroscience News Is Unreliable
- An Analogy Clarifying Why the "Brain Stores All Your Memories" Dogma Is Untenable
- Why Darwinism Fails to Explain the Human Mind
- What Is It That a Brain Does?
- Cloud Computing and a Non-Local Model of Consciousness
- Why We Do Not Understand the Origin of Complex Biological Innovations
- Our Minds May Arrive Top-Down Not Bottom-Up
- Fancy New Technology Fails to Prove Memory Dogmas
- The Argument for Determinism Collapses Once We Discard the "Minds Come from Brains" Dogma
- Animal Experiments Conflicting with the Dogma That the Brain Stores All Memories
- Memory Recall Reality Versus the "We Can't Remember Well" Bunk of Professors
- Neuroscientists Keep Using Misleading Coloring in Brain Visuals
- Most Scientists Don't Follow Formal Evidence Standards, Unlike Judges
- Experimental Evidence for ESP Is Well-Replicated
- Imaging of Dendritic Spines Hint That Brains Are Too Unstable to Store Memories for Decades
- NIH Bets $1,434,188 That Synapses Don't Store Memories
- A New Case of Very Large Brain Damage and Normal Mental Function
- When Clue-Blind Professors Ignore All the Signs

The paper "A Neuroscientific Model of Near-Death Experiences" makes the claim that "In rats undergoing asphyxia, a dramatic initial surge in brain serotonin levels was observed — up to 100–200 times higher than baseline." This is a reference to a 2015 paper that did not reliably observe any such thing, because at the time there was no reliable technology for measuring short-term spikes in serotonin levels, and the study group size was way too small (only 7 rats) for a reliable result to be claimed. The paper used a microdialysis and liquid chromatography-mass spectrometry (LC-MS) method that at the time was not very reliable because of reasons discussed in the appendix of this post. After giving us detail after detail about serotonin, none of which have any relevance to explaining near-death experiences, the section drifts off to a discussion of other topics such as DMT trips and speculations about evolution. The section has no relevance to explaining near-death experiences. A 2025 paper highlighting the unreliability of serotonin measurements is entitled "The Continued Mismeasurement of Plasma Serotonin: A Systematic Review." It states this: *" The review covered the period from 2010 to July 2024 and is a follow-up of a similar review published in 2011 which found that nearly all published reports of PPP 5-HT [serotonin] were clearly and markedly erroneously high. This problem has persisted unabated with nearly all retrieved 47 reports from the past 14 years also apparently being erroneously high."*

- **The section entitled "the glutamatergic system.**" We have five paragraphs discussing the role of the neurotransmitter glutamate in the brain. None of it has any relevance to explaining near-death experiences. Senselessly the authors try to use this discussion as a launchpad for discussing ketamine, a hallucinogenic drug. This goes nowhere, because the authors confess that while someone "hypothesized that in life-threatening situations, an endogenous ketamine-like neurotoxin might be released," the fact is that "no empirical evidence has been found to support the existence of such a molecule." The authors attempt to insinuate that during cardiac arrest there may be a big increase in glutamate. There is no robust evidence that this is true, and if it were true, it would be irrelevant, because glutamate is not any type of hallucinogen. As I discuss in my post "The Groundless Myth That 'Floods" or 'Surges' Help Explain Near-Death Experiences," there is no evidence that any type of relevant brain chemical surges during cardiac arrest or near-death experiences. Claims of such a surge is a deceptive element repeated again and again in articles or papers attempting to explain near-death experiences. There are two very strong reasons why such claims must be wrong or irrelevant. The first fact is that we know that neurotransmitters are synthesized at a very slow rate, making unbelievable all claims of a sudden surge in neurotransmitters at death. The second fact (supremely relevant but senselessly ignored by the co-authors of the paper "A Neuroscientific Model of Near-Death Experiences") is that brains become isoelectric (i.e. they flat-line) within 10 to 20 seconds of cardiac arrest, making all claims about neurotransmitter increases at such a time irrelevant or unbelievable.

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- Panpsychism Arguments Involve an Equivocation Fallacy
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- Just Call Them "Machine-Metaphor-Misguided"
- Way Off in Their Predictions, Neuroscientists Keep Misdescribing Human Memory Performance
- The Biggest Brain Projects Are Still Failing to Support Prevailing Brain Dogmas
- A New Paper Reminds Us Neuroscientists Can't Get Their Story Straight About Memory Storage
- NSF Grant Tool Query Suggests Engrams Are Not Really Science
- Suspect Shenanigans When You Hear Claims of "Mind Reading" Technology
- No, a USC Team Did Not Show "How Memories Are Stored in the Brain"
- Why ESP Discredits the "Brains Make Minds" Claim
- Beware of Neuroscientists Using Cell Nicknames
- The Press Often Gives Us Fake News About Brains
- No Solid Principle Justifies "Brains Make Minds" Thinking
- "Thousands of Participants Are Needed for Accurate Results," But Most Brain Scan Studies Don't Even Use Dozens
- Why the Academia Cyberspace Profit Complex Keeps Giving Misleading Brain Research Reports
- "Brains Make Minds" Idea Flunks an Audit of a Large Brain Scan Database
- Big Study Finds Brain Gray Matter and Cortical Thickness Peak at Age 6 or Earlier, Contradicting Brain Dogmas
- Why the "A Memory Is Stored Throughout the Brain" Idea Makes Things Much Worse
- Principles of a Post-Materialist Science
- EEG Studies Fail to Provide Robust Evidence That Brains Think or Retrieve Memories
- Seven Things in Fast Retrieval Systems, None of Which Your Brain Has
- Studies Debunk Hippocampus Memory Myths
- 11 Authorities Seem to Realize That "Your Brain Is a Computer" Is a Junk Metaphor

- **The section entitled "the noradrenergic system."** We have three paragraphs giving an irrelevant discussion of a chemical called noradrenaline. The attempt to link this discussion to near-death experiences is feeble and laughable. We have the claim that "noradrenaline might also aid memory consolidation though its effect on the amygdala" and that "the ability of humans to recall vivid memories even on the verge of death could be explained by high noradrenaline levels during asphyxia." The statements are nonsensical. There is no evidence that memory recall is increased when people have higher levels of noradrenaline. The relevant fact here (completely ignored by the authors) is that during cardiac arrest brain waves very quickly become isoelectric, and that brains shut down electrically and flatline, something that (under assumptions brains store memories) should completely prevent the formation of any new memories. Instead of there being a neuroscience reason why someone might form vivid memories during cardiac arrest, there is the strongest neuroscience reason why such a thing should be impossible under the assumptions of neuroscientists.
- **The section entitled "the cholinergic system."** We have two paragraphs discussing the neurotransmitter acetylcholine. We have the unfounded claim that acetylcholine enhances memory formation. Neuroscientists do not have any credible theory of memory formation, and there is no strong evidence that increased acetylcholine levels cause higher levels of memory formation. The attempt in the paper to link acetylcholine to near-death experiences is a feeble one: merely something like insinuating that acetylcholine helps memory, and that acetylcholine might help someone remember a near-death experience. The authors continue to be utterly oblivious to the most relevant fact here: that when a brain is isoelectric, in an EEG-flatline state and not generating any brain waves, the formation of memories should be impossible under "brains store memories" assumptions.
- **The section entitled "the endorphinergic system."** We have three paragraphs discussing endorphins, a type of brain chemical widely discussed as a "feel good" kind of chemical. We have the incorrect claim that a study showed that endorphins increase in dogs undergoing sudden cardiac death. The reference is to a 1995 paper that should never be cited as credible evidence for such a claim. In 1995 there did not exist any reliable technology for measuring very short-term spikes in brain chemicals in animals such as dogs. The paper does not mention any study group size, and we may assume that it was one of innumerable neuroscience experiments using a study group size way-too-small for a reliable result to be claimed. Here we must remember that if people had reliable evidence for the claim that endorphins increase during sudden cardiac death, they would be citing papers of recent decades, not papers from 30 years ago. The attempt to link endorphins to near-death experiences is a feeble one: merely the suggestion that endorphins might help explain mood elevation.
- **The section entitled "the dopaminergic system."** The brain chemical discussed is dopamine. We again have a dubious claim that such a chemical was found to have increased in dying rats. The claim is based on the 2015 paper here, the paper "Asphyxia-

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- Cognitive Effects of Epilepsy Surgery Clash with "Brains Make Minds" Dogma
- Evolution Does Not Explain DNA, DNA Does Not Explain Bodies, and Bodies Do Not Explain Minds
- "Brain Chemical Imbalance" Theory Is Fading Out as an Explanation for Mental Illness
- Why Plasticity and Neurogenesis Fail to Explain Minds That Work Well After Massive Brain Tissue Loss
- They're Calling It a Huge Memory Research Fraud, But Is It Only the Tip of the Iceberg?
- So Much Misleading Talk Occurs in Claims of a Scientific Consensus
- Shrink-Speaking About a Mere "Problem of Consciousness" Is As Wrong As Shrink-Speaking About a Mere "Problem of Human Shape Origination"
- Longtermism Is Fueled by a Goofy Belief in Computer-Generated Lives
- Given Their Narrow Studies and Slim Narrow PhD Dissertations, Why Are We So Swayed by Neuroscience PhDs?
- Some of the Weak Papers Neuroscientists Cite As Evidence for Their Chief Claims
- For Insight About Your Brain and Mind, Ponder the Never-Founds
- TV Medical Dramas Give Us Wrong Ideas About Minds and Death
- Brain Imaging Shows No Appreciable Neural Correlates of Memory Activity
- The Evidence Inversion Syndrome Blights Academia
- Poorly Designed Brain Scan Experiments Needlessly Put the Needy at Risk
- Science Literature Is Full of Misleading Claims About Brain Waves
- The US Government's False Claims About DNA
- If Neuroscientists Acted Like Cosmologists, They Might Say You Have an Invisible "Dark Brain"
- Exceptionally Fast Thinking Cannot Be Explained by Slow Brains Like We All Have
- Scientists and Clergy Have Much in Common
- 30 Things That Would Never Occur If Prevailing Neuroscientist Dogmas

activated corticocardiac signaling accelerates onset of cardiac arrest." At that time there did not exist any reliable methods for making real-time *in vivo* measurements of brain chemicals over short periods of time such as ten minutes. The technique used by the paper (microdialysis and liquid chromatography-mass spectrometry or LC-MS) was not suitable for accurately measuring real-time changes in neurotransmitters over a tiny time scale such as 10 minutes. (See the appendix for more on the problems with LC-MS.) The paper cited was not a robust science paper because of its use of way-too-small study group sizes such as only 7 rodents. One of the co-authors of the "A Neuroscientific Model of Near-Death Experiences" paper (Martial) makes a misstatement about a previous paper of hers, claiming, "Martial et al. found that coma survivors who reported NDEs exhibited suboptimal source monitoring and an increased tendency to illusory recollection, compared with those without NDEs." To the contrary, the paper in question (doing some memory test on 20 subjects reporting a near-death experience and 20 who did not) reported "we obtained equivalent proportions of correct and false recall performance in both groups." The section attempts to insinuate that dopamine causes hallucinations. There is no strong evidence that dopamine causes visual hallucinations. The paper "Effects of Dopamine in Man" reports on the effects of 13 subjects who were given a 1% infusion of dopamine, causing dopamine levels many times higher than naturally occur. The paper makes no mention of any hallucinatory effects or any mental effects. A similar experimental result (reporting no hallucinations) is reported in the paper here, which tested artificially produced dopamine spikes as high as 1000 times higher than normal. Attempts to claim dopamine levels have an association with the merely auditory hallucinations of schizophrenia are advanced by pharmaceutical companies and neuroscientists financially entangled with them, who are interested in selling pills that supposedly affect dopamine levels. The claim is irrelevant, because of the lack of robust evidence that dopamine sharply increases in humans during sudden cardiac arrest or near-death experiences (outside of perhaps one or two small areas in the middle of the brain like the striatum), the implausibility of the claim that it could very quickly increase during such rapid events (given the very slow production rate of all neurotransmitters), the fact that brains that quickly flatline a few seconds after cardiac arrest cannot be hallucinating brains, and the fact that very strong dopamine infusions in humans do not produce hallucinations. No one has ever caused someone to have a visual hallucination by giving him an injection or infusion of dopamine.

- **The section entitled "the gabaergic system."** We have two paragraphs discussing GABA, neither of which discuss any convincing link between such a chemical and near-death experiences.

We then have a huge misstatement in the "A Neuroscientific Model of Near-Death Experiences" paper, this claim: "Anecdotal accounts of perceptions during NDEs are available, but no empirical research to date has used sufficiently rigorous methodology to objectively verify whether these perceptions corresponded to actual external stimuli." This is not true at all. Researchers have very carefully attempted to discover whether reports of out-

Were True

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- The Two Huge Mistakes Involved in Typical Talk of a "Hard Problem of Consciousness"
- Neuroscientists Keep Wrongly Assuming the Source of Something Must Be Near Its Observed Manifestations
- The Vague Unfounded Boasts of Biology Sound Like the Vague Unfounded Boasts of Astrophysics
- 8 Reasons for Doubting Claims of the Heritability of Intelligence
- Widely Read Scientific Paper Asks, "What If Consciousness Is Not an Emergent Property of the Brain?"
- Exhibit A Suggesting Scientists Don't Know How a Brain Could Retrieve a Memory
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- The Latest Evidence That Scientists Trying to Explain Memory Creation

of-body experiences reported observations that an immobile observer should have been unable to make, and whether such observations could be verified. Very many times such observations were verified as correct. You can read very many examples in my post here. Because all such cases are totally unaccountable under a neuroscientific account of near-death experiences, I can understand why the paper authors would want to misinform us about the existence of such cases.

We then have yet another example in the paper of a citation of a neuroscience paper that is almost certainly junk science. We read, "Interestingly, Britton and Bootzin demonstrated that NDE experiencers tend to have more temporal lobe epileptiform EEG activity and more temporal lobe epileptic symptoms than matched controls who never had an NDE." A look at the paper shows a paper behind a paywall, one that reports in its abstract no study group size. A very good rule of thumb regarding neuroscience experimental studies is that when the abstract reports no study group size, there is a very high likelihood that the experiment used some way-too-small study group size, a size that the authors were ashamed to mention in their abstract. There is no good evidence that those having near-death experiences have different day-to-day EEG readings than those who do not.

More bad citations follow. We have the claim that "intracranial stimulation of the right junction seems to elicit disembodiment resembling an OBE," and a reference is given to a paper that made no such claim. We have the claim that "electrical stimulation of the left junction can trigger an own-body illusion of another person in the extrapersonal space, resembling the encounter of entities reported in NDEs." The reference given is to another paper behind a paywall, one that does not make such a claim in its abstract, but instead merely claims that such electrical stimulation of the brain caused a single subject to report seeing a figure that "closely 'shadowed' changes in the patient's body position and posture," something not reported in near-death experiences. The claims are irrelevant, because they involve artificial electrode stimulations of the brain not matching what occurs during near-death experiences.

Having given us nothing at all in the way of a neuroscientific explanation for near-death experiences, the paper authors move on to some other parts of their muddled mishmash. The next part is a section entitled "Psychological Processes." We get nothing in the way of a credible psychological explanation for near-death experiences. The authors confess that "that most people who recall NDEs have no global cognitive functioning deficits or specific pathological disorders." We have a claim that those who have near-death experiences daydream more often. Two papers are given for this claim, but neither of the papers make such a claim.

Referring to near-death experiences, the authors then incorrectly claim, "Some related traits, such as fantasy proneness, have also been found in the NDE population." As the reference for this claim, the paper refers us to Martial's very poorly designed paper "Fantasy proneness correlates with the intensity of near-death experience." It's a very poor piece of work for several reasons. Subjects were given something called the Creative Experiences Questionnaire. That survey is described in the paper here. It is one of surveys in the psychiatric field that seems designed to gaslight and defame people who have had normal, healthy experiences with psychic phenomenon. Among the 25

Are Lost in the Woods
- Study Suggests Massive Faking in Neuroscience Papers
- How Neuroscientists and Science Writers Try to Fool You Into Thinking Brains Store Memories
- Some People Our Neuroscientsts Don't Want You to Know About
- 10 Reasons Synapses Cannot Be a Storage Place for Human Memories
- Why Most Correlation-Fishing Experimental Neuroscience Is Worthless
- Pharmaceutical Company Entanglements Cloud the Objectivity of Neuroscientists and Psychiatrists
- The 4 Nonsensical Parts of the Tale Your Brain Instantly Retrieved an Answer Learned Long Ago
- Neuroscientists Don't Seem Like Paragons of Diligence
- "Brain Is the Most Complex Object in Universe" Claim Exemplifies Credulity About Brain Claims
- Exhibit A That Scientists Have No Understanding of a Physical Basis of Human Memory
- Goofs of the Site Brainfacts.org
- Shady Tricks Used by Writers About the Brain
- The 11 Biggest Neural Shortfalls Hinting Brains Don't Make Minds
- Analysis of 23,810 Brain Scans Finds "Neither Structural Nor Functional Imaging Predicted Individual Psychology"
- All Papers Relying on Rodent "Freezing Behavior" Estimations Are Junk Science
- The Human Brain Project Spent Billions, But Failed to Bolster Claims About Brains Making Minds
- Hydrocephalus Studies Confirming Low Correlation Between Brain States and Intelligence
- The Lack of Evidence That Brains Produce Dreaming, and Some Evidence Hinting They Don't
- How the Academia-Cyberspace-Pharmaceutical-Biotech-Publishing Complex Incentivizes Bad Brain Research
- The Lack of Correlation Between Most Mental Illness and Brain States
- They Stored and Studied Thousands of Brains, But Still Failed to Show Mental Illness Comes From Sick Brains
- They Stored and Studied Thousands of Brains, But Still Failed to Show Brains Store Memories

questions are questions in which people are asked whether they agree with these statements:

- "I sometimes feel that I have had an out-of-body experience."
- "During my life I have had intense religious experiences which influenced me in a very strong manner."
- "I often have the experience of thinking of someone and soon afterwards that person calls or shows up."

Anyone having a near-death experience (in which out-of-body experiences are so common) would be likely to answer affirmatively to the first two of these questions. Anyone having the common experience of ESP would be likely to answer affirmatively to the last question. It is very bad circular reasoning to be including such questions in a survey given to those reporting near-death experiences, and using affirmative answers as evidence of higher "fantasy proneness." Answering affirmatively to such questions is not evidence of fantasy proneness. Neither near-death experiences nor ESP-type experiences occur through any process of fantasy. Martial's very poorly designed 2018 paper does not actually show any robust evidence that those having near-death experiences are more fantasy prone than those not reporting such experiences. Excluding 3 of the questions, she gets an average score of 8 on this Creative Experiences Questionnaire for those having near-death experiences (Table 2); and she says that this is higher than the score of her 100 controls given the same survey. But the year 2001 paper introducing this Creative Experiences Questionnaire had given data for 332 normal subjects given the survey (not people having near-death experiences), and had reported that the average scores on the survey were 9.2 for men and 8.7 for women. So it would seem that instead of Martial's results showing greater fantasy proneness for those near-death experiences, her results actually show slightly less fantasy proneness. Very conveniently, Martial fails in the paper to make any mention of the survey data for the 332 normal subjects in the year 2001 paper, data which refutes her claim of greater fantasy proneness in those having near-death experiences.

Near the end of the paper "A Neuroscientific Model of Near-Death Experiences" the authors claim to have a "model" of near-death experiences. They really have no such thing, because they have not addressed any of the main explanatory issues raised by such experiences. Their so-called model describes a set of events that does not match what happens physically to the body during cardiac arrest or during a near-death experience. They give the name NEPTUNE to this so-called model, with NEPTUNE standing for Neurophysiological Evolutionary Psychological Theory Understanding Near-death Experience. This acronym is an indication of what a mishmash mess we have. Evolution is something believed to occur over extremely long timespans such as millions of years or many thousands of years. It is nonsensical to use the term "evolutionary" to refer to brief events in a person's life.

The paper's grand summary of the so-called "NEPTUNE model" consists of two paragraphs, both of which I quote below in italics. Here is the first paragraph:

"*NEPTUNE assumes a cascade of concomitant psychological and neurophysiological processes, which might start with systemic hypotension, oxygen deprivation, elevated CO2 levels, disruption of ATP production, and*

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- This Is What Built the Mighty Castle of Materialism
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- Neuroscientists Claim "Drifting Representations," But It's Mainly Just Their Pareidolia
- Neuroscience "Best of 2023" Reviews Suggests They're Getting Nowhere Trying to Explain Minds by Neural Explanations
- Convoluted "Spaghetti Code" Analysis Pathways Help Neuroscientists Conjure Phantasms That Don't Exist
- 50 Types of Questionable Research Practices
- Cox's Cases Were Better Explained as Evidence Brains Don't Make Minds
- No, Scientist, That Isn't Human Memory or Brain Action, But Merely Computer Activity
- You Would Never Guess From Her Videos That She Has No Frontal Lobes
- Neuroscientists Often Sound Like They Never Seriously Studied Psychical Research
- DNA Is Not a Blueprint, So "All Bets Are Off" About Body Origins and Mind Origins
- Universities Continue to Boast About Pitifully Weak Neuroscience Results
- A Biochemist's Promissory Note About Explaining Minds Sounds Very Lame
- No One Is Actually Doing Thought-Reading by Scanning Brains or Reading Brain Signals
- A Biologist Calls "Orthodox Science" a "Religion" and "Belief System"
- She Has Photographic Memory and Severe Unmanageable Epilepsy
- Traumatic Brain Injury Results Clashing With Prevailing Dogmas About Brains
- "Cells With Minds" Theory Is As Bad As "Brains Make Minds" Theory
- Surprising Studies on Memory Loss or IQ Changes After Brain Surgery or Brain Damage
- Pareidolia Helps Neuroscientists Getting Nowhere Trying to Show a Brain Basis for Memory

a decreased pH, culminating in cerebral acidosis. Triggered by cellular energy deprivation, these intricate processes can set off a chain reaction of complex cellular responses, ultimately leading to increased neuronal excitability in cortical associative regions in the mesiotemporal lobe, occipital lobe, insular cortex and temporoparietal–occipital hot zone junction, permitting the perceptual content of the experience to become conscious. The neural mechanisms underlying NDEs tend to be similar to those underlying REM intrusions. ***Enhanced neuronal responsiveness, resulting in increased firing rates, ultimately leads to the massive release of neurotransmitters****."*

Comment: Near-death experiences typically occur during cardiac arrest, and the authors claim that "the model focuses specifically on the prototypical scenario cardiac arrest, which seems to be the most common triggering aetiology for NDEs." Cardiac arrest bears no resemblance to "REM intrusions," the latter not involving the heart stopping. During cardiac arrest, there is no "Enhanced neuronal responsiveness, resulting in increased firing rates." **There is exactly the opposite.** EEG readings show that very quickly (within 10 to 20 seconds) after the heart stops in cardiac arrest, neuron firing rates die down to nothing, resulting in a flatlining of brain waves, something called an isoelectric state that is the exact opposite of "increased firing rates." The scenario described in the quote above is a fantasy that is the exact opposite of what happens during cardiac arrest. We have here no "model" of what happens in cardiac arrest, but a description that is the exact opposite of what happens. It is rather like someone claiming to have a "model" of plant growth, one that claims that plants die when you water them, something that is the opposite of what is observed. When I do a Google search for "what are neuron firing rates when the brain is isoelectric," its latest AI gives this: "During an isoelectric state of the brain, which is often detected by a flatline or extremely low-amplitude EEG, **the firing rates of neurons are significantly reduced and may be completely suppressed, particularly in the cortex**."

There is no sound observational basis whatsoever for the claim that there is some "massive release of neurotransmitters." Since the claim that such a thing happens is based on the exact-opposite-of-the-truth claim that there are "increased firing rates" in the brain during cardiac arrest, we should have no confidence in such a claim. Everything we know about the very slow synthesis and transmission of neurotransmitters in the brain argues against the possibility that there could be any such "massive release of neurotransmitters."

"*In tandem with other neurochemical mechanisms, we hypothesize the following key neurochemical events in NDEs. We propose that calming effects are induced by increased 5-HT1A receptor availability, as well as by transient increases in endorphin and GABA levels, potentially leading to a feeling of deep peace, whereas vivid visual hallucinations are triggered by hyperactivation of 5-HT2A receptors and dopamine (Fig. 2). The profound feelings of hyper-reality associated with these hallucinations could be explained by increased release of dopamine specifically. Determining the precise role of glutamate in NDEs remains challenging, but we tentatively suggest that it could be involved in cognitive dissociation. Memory encoding of this phenomenology would be promoted by release of noradrenaline, acetylcholine and glutamate, triggered by the stressful or life-threatening situation, to enhance coping. Individual predisposition to dissociation might*

- HSAM Memory Whiz Subjects Scored 25 Times Higher on a Random Dates Test
- How High-Speed Life Reviews in Near-Death Experiences Discredit "Brains Make Minds" Claims and "Brains Store Memories" Claims
- More Indications That Scientists Have No Understanding of How a Brain Could Think
- Searching Hard for Evidence of Strokes Causing Loss of Episodic or Conceptual Memories, They Come Up Short
- Cognitive Neuroscience Is Floundering, So the Kavli 2024 Neuroscience Prize Went to Low-Quality Research
- We Cannot Trust Neuroscientists to Speak Accurately About What Brains Do and What Minds Experience
- The Mythology of "Memory Maintenance Molecules"
- No, Noise Miners, Neurons Don't Encode Words
- The Lack of Bodily Addresses Crushes the Credibility of Mechanistic Biology and Mechanistic Psychology
- She Didn't Seem to Need the Right Half of Her Brain, and Losing It Did Not Seem to Dim Her Memories
- 60+ Aspects of the Human Mind, and Whether Brains Explain Them
- Papers Claiming Brain Memory Storage Keep Citing Poor Science Papers
- A Report of "Unimpaired Faculties Without a Brain" (John Bly)
- Exhibit A That There Is No Such Thing as a Chemical Root of Consciousness
- Look Very Closely at a Study Claiming Thought Reading of Brains, and You'll Find the Shady Tricks Behind It
- UK Biobank Study of Thousands of Brains Finds Negligible Correlation Between Brain Size and Intelligence
- Neuroscientists Senselessly Think They Can Perform Innumerable Contortions of Brain Data, and Then Claim a Discovery
- They Mapped 150 Million Synapses, and Found No Sign of Stored Memories
- Brains Show No Physical Signs of Reading or Retrieval When You Recall Something
- In 1941 the Editors of Scientific American Confessed That Telepathy Was Proven
- Old Newspaper Stories Relevant to Whether Brains Make Minds

facilitate this neurophysiological cascade, and the dissociation process can be seen as a defence mechanism to cope with the stressful or life-threatening situation, consistent with an evolutionary role."

Comment: There seems to be nothing of any credibility or substance here. There is no robust evidence that endorphin levels or GABA levels increase very strongly in humans during cardiac arrest. Because the brain electrically shuts down very quickly during cardiac arrest (within 10 or 20 seconds after the heart stops), it cannot be that during such a time " vivid visual hallucinations are triggered by hyperactivation of 5-HT2A receptors and dopamine," and dopamine is not a cause of visual hallucinations. Contrary to a "hyperactivation" of any part of the brain during cardiac arrest, there is the exact opposite: an electrical shutting down of the brain which would make impossible any such thing as brain-caused hallucinations. There is no robust evidence of greatly increased dopamine levels in humans during cardiac arrest or near-death experiences, and it is not true that some surge in dopamine will produce a visual hallucination. No one has ever done an experiment in which injecting or infusing someone with dopamine produced a visual hallucination. In 1952 they did do an experiment in which 13 subjects were infused with 1% dopamine (causing dopamine levels very many times larger than naturally occur); and such an experiment produced no hallucinations and no mental effects. A similar infusion experiment increasing dopamine levels in humans a thousandfold is reported here; it also reports no hallucinations resulting. The comment about a defense mechanism is simply the thinnest of psychology hand-waving, using the old term "defense mechanism" that was popular with Freudian psychologists. This is just a little psychology sprinkling, to dress up a tiny bit the physiology fantasy, which is a description that is the exact opposite of what happens in a brain during cardiac arrest.

To clarify:

- There is no robust evidence that serotonin very sharply increases in the human brain during cardiac arrest or near-death experiences, and if it were to increase, that would do nothing to explain near-death experiences, because serotonin is not a hallucinogen, and brains are electrically shut down during cardiac arrest. The paper here (discussed in the appendix) involved experiments that increased by very many times (between 100 times and 1000 times, in other words 10000% to 100000%) the serotonin levels in volunteers, by infusions of serotonin. No hallucinations were reported.
- There is no robust evidence that glutamate increases in the brain during cardiac arrest or near-death experiences, and if it were to increase, that would do nothing to explain near-death experiences, because glutamate is not a hallucinogen, and brains are electrically shut down during cardiac arrest. One paper says, "Many preclinical studies revealed decreased glutamate whole tissue content after ischemia."
- Because adrenaline is often injected into people undergoing cardiac arrest to try and stop such an arrest, there may be noradrenaline increases in the brain during some cardiac arrest cases and near-death experiences. But that does nothing to explain near-death experiences, because noradrenaline is not a

- Newspaper Accounts of Memory Marvels (Part 1)
- Why Your Brain Is Not Like a Computer
- They Memorized Many Times Faster Than a Brain Could Ever Do
- Faltering Neuroscientists Improperly Offer Computer Science Papers as Examples of Neuroscience Progress
- The Brains of 60 Subjects Seemed to Look the Same During Eyes Closed Mental Rest, Recall and Math Activity
- The Problem of Explaining Human Minds Is a Million Times Larger Than a Mere "Problem of Conscious Experience"
- Large Neuron Groups Cannot Be Sequentially Traversed, So Brains Cannot Store Complex Learned Information
- Eyes and Minds Can Focus, But Brains Cannot Physically Focus
- Most Subjects in Neuroscience Research Do Not Understand the Risks They Are Taking
- Neuroscientists Cannot Credibly Explain Any of These 11 Features of Out-of-Body Experiences
- Microscopes Will Never Find the Slightest Trace of Learned Information in a Human Brain
- Newspaper Accounts of Memory Marvels (Part 2)
- The Reason You Will Never Be Able to Upload Your Mind Is the Same Reason You Won't Ever Need To
- Brain Tumors Seem to Have Relatively Little Effect on Cognitive Function
- Newspaper Accounts of Memory Marvels (Part 3)
- They Mentally Calculated Faster Than a Brain Could Ever Do
- Claimed Evidence for "Concept Cells" Is Just Noise-Mining Nonsense
- More Candid Confessions of the Cognition Experts
- Neuroscientists Offer Only the Most Hazy Hand-Waving When Trying to Explain Memory
- List of Breakthrough Prize Winners in Life Sciences Hints at the Lack of Progress in Cognitive Neuroscience
- HSAM Wonder Daniel McCartney Was a Math and Memory Marvel
- LTP Research Has Done Nothing to Show Any Neural Basis for Memory Creation
- The Lack of Strong Links Between Mental Illness and Brain States

hallucinogen, and brains are electrically shut down during cardiac arrest.

- There is no good evidence that acetylcholine increases in the brain during cardiac arrest and near-death experiences, and if it were to increase, that would do nothing to explain near-death experiences, because acetylcholine is not a hallucinogen, and brains are electrically shut down during cardiac arrest.
- There is no strong evidence that endorphins increases in the brain during cardiac arrest and near-death experiences, and if endorphins were to increase during such events, that would do nothing to explain near-death experiences, because endorphins are not a hallucinogen.
- Discounting some not-very-convincing studies (with too-small study group sizes) that may suggest an increase in dopamine in two tiny regions of the brain (the striatum and the hippocampus) of rats during ischemia, there is no robust evidence that dopamine very sharply increases in the human brain during cardiac arrest and near-death experiences; and if it were to increase, that would do nothing to explain near-death experiences, because while hypothesized (without strong evidence) to be more common in some who have auditory hallucinations, dopamine is not a cause of suddenly appearing visual hallucinations, because very strong infusions of dopamine in humans do not produce any hallucinations or mental effects, and because brains are electrically shut down during cardiac arrest.
- There is no robust evidence that GABA increases in the brain during cardiac arrest and near-death experiences, and if it were to increase, that would do nothing to explain near-death experiences, because GABA is not a hallucinogen, and because brains are electrically shut down during cardiac arrest.

Given the very extreme difference between what actually happens in the brain during cardiac arrest (a very quick flatlining and a shutting-down of electrical activity) and the fictional or fantasy "hyperactivation" description of the two paragraphs quoted above, no one should be describing the NEPTUNE scenario as a model of near-death experiences, unless they use model in quotation marks as I do in my title. You do not model something when you give a physical description of that thing radically different from the observed physical reality.

All attempts to dismiss near-death experiences as hallucinations lack credibility for several reasons:

(1) The lack of any robust evidence that any chemical capable of causing sudden visual hallucinations is released at the time of a cardiac arrest.
(2) The impossibility of brain-caused hallucinations during cardiac arrest, because of the reality of the brain very quickly shutting down electrically during cardiac arrest, which should prevent any conscious experience under "brains make minds" assumptions, whether involving hallucinations or not involving hallucinations.
(3) The very high similarity of observational reports during near-death experiences, involving a very strong recurrence and repetition of descriptions of viewing the body from about two meters away or from the ceiling,

- Subject MM Had a Stupendous Memory for Facts, But a Normal Brain
- Lighting-Fast Readers Exceed the Speed Limits of a Brain
- They Too Mentally Calculated Faster Than a Brain Could Ever Do
- They Did Well After a Huge Loss of Brain Tissue
- Newspaper Accounts of Memory Marvels (Part 4)
- NIH's Million-Dollar "Epigenetic Memory" Bet Fails
- The Myths About Patient K. C. and Patient H. M.
- He Had Half a Brain But "Superior Intelligence"
- New Poll Suggests About 29% of Neuroscientists Doubt the Synaptic Memory Theory
- They Lost Huge Parts of Their Brains, But Their Knowledge and Recollection Were Preserved
- The Groundless Myth That "Floods" or "Surges" Help Explain Near-Death Experiences
- Physically Unrealistic NEPTUNE "Model" of Near-Death Experiences Is a Misleading Mishmash

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descriptions of passing through a tunnel, descriptions of encountering some mysterious numinous light, descriptions of encountering some mystical realm, descriptions of life-reviews, and descriptions of encountering dead relatives. Hallucinations could be of millions of possible things, and we would expect hallucinations to produce random content. The very strong observation repetition in near-death experiences argues very strongly against any hallucination explanation. Similarly, if three people on my block keep reporting the appearance of a bright blue van at 9:00 PM, it is very unlikely that such reports are occurring by hallucinations, as it would be very, very unlikely that hallucinations in different people would be so similar.

(4) The many cases in which out-of-body experiences involve an observer claiming to see something that was not observable by his body, with the observation being subsequently verified as matching physical reality. Many such cases are described in my post here.

What went on in the two previous italicized paragraphs quoted above is the same type of thing that goes on again and again when neuroscientists attempt to explain things utterly beyond their understanding. We should remember that neuroscientists have no real understanding of ordinary mental phenomena such as insight, mathematical calculation, imagination, recognition, self-hood, memory formation, idea creation, lifelong memory persistence, empathy, or the instant recall of lots of detailed relevant information upon hearing a name or seeing a face. Neuroscientists no more understand such common phenomena than they understand uncommon phenomena such as near-death experiences. When asked to explain such common things (which are actually beyond any neural explanation), neuroscientists engage in vacuous jargon-decorated hand-waving that does not amount to any credible explanation. They typically attempt to sprinkle such vacuous attempted explanations with lots of references to different types of chemicals, to try to impress those who are easily impressed. The astute and diligent scholar of the philosophy of mind, neuroscience and psychology will look at such charades and say, "There's no there there."

Neuroscientist Jack: They keep asking me to explain how a brain does some basic mental thing, and I keep lacking a decent answer.
Neuroscientist Jane: Just mention a whole bunch of brain chemicals and brain parts, and people will think you understand.

Appendix (which the average reader may want to skip): The 2015 paper mentioned above entitled "Asphyxia-activated corticocardiac signaling accelerates onset of cardiac arrest" claimed to use technologies called microdialysis and liquid chromatography-mass spectrometry (LC-MS). In 2015

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there did not exist any technology for reliably tracking changes over a few minutes in neurotransmitters such as serotonin existing in only the tiniest trace amounts such as a few nanomoles. The pitfalls of this LC-MS technology are discussed in the 2012 paper here ("Pitfalls Associated with the Use of Liquid Chromatography–Tandem Mass Spectrometry in the Clinical Laboratory"), which states this:

"However, application of this technology is not automatically or necessarily translated into accurate results. Its pitfalls have to be recognized and must be addressed systematically. In particular interferences from in-source transformation of metabolites, differential matrix effects of analyte and internal standard and isobaric transitions can lead to inaccurate results of LC-MS/MS analyses."

A similar paper discusses at great length many pitfalls and ways-to-go-wrong using this method, stating "We observed cases of false-positive results with the use of liquid chromatography coupled with tandem mass spectrometry (LC-MS/MS)." Still another paper (on page 109 of the document here) refers to an "Achilles heel" of this liquid chromatography-mass spectrometry method (LC-MS), saying the problem can lead to "gross errors" when trying to measure the levels of some chemical in a sample. The same document tells us on page 120 that "it must be emphasized that the risk of gross errors is probably higher for LC-MS/MS compared to analyses run on standard clinical chemistry analyzers."

Mass spectrometry does not measure the levels of neurotransmitters in a sample. As a wikipedia.org article tells us, "Mass spectrometry (MS) is an analytical technique that measures the mass-to-charge ratio (m/z) of charged particles (ions)." Attempting to deduce changes in very tiny levels of a particular neurotransmitter chemical (over a time span of a few minutes) from mass spectrometry readings would involve guesswork and some complex and largely arbitrary analysis pathway that would be very hard to get right. To get reliable results, you would need at least three things:

(1) A sufficient sample size, such as 20 animals per study group, rather than the mere 7 animals used in the paper "Asphyxia-activated corticocardiac signaling accelerates onset of cardiac arrest."

(2) A blinding protocol which would make sure that each person analyzing extracted brain fluid had no idea where in a time sequence the sample corresponded to, to avoid some effect in which analyst bias helped produced higher estimations in later samples, to fit in with some desired "increase of neurotransmitters" narrative.

(3) An adequate replication of the results by other well-designed studies using adequate sample sizes.

Nothing of the sort occurred here. The sample size used was too small for any decent statistical power: only 7 animals. No mention is made of a blinding protocol. And the study was never replicated by additional well-designed studies.

The paper here describes experiments in which human subjects were infused with serotonin. The serotonin levels of the patients were increased by very many times. When I do a Google search for "Amount of serotonin in the blood moles per liter," I get an answer saying, "the normal range of serotonin in the blood, expressed in moles per liter, is approximately 0.00000028 to

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Labels

- "brain as computer" metaphor
- above-average IQ with huge brain tissue loss
- academia dysfunction
- acquired savant syndrome
- adult neurogenesis
- agenesis of corpus callosum
- aging
- AI
- Alzheimer's disease
- amnesia
- analytic idealism
- bad computer programming in neuroscience studies
- bad predictions by scientists
- bad psychiatric surveys
- bad psychiatry
- bilingualism with half a brain

0.00000114 mol/L" (moles per liter). The paper says that it increased serotonin levels to between .0000001 and .0001 moles per liter for 22 subjects, and that two of the subjects had their serotonin levels increased to .001 moles per liter. This was an experiment that was increasing serotonin levels in humans by a factor of between 100 times and 1000 times. No hallucinations were reported. Clearly speculations that serotonin increases during cardiac arrest might cause hallucinations are as groundless as claims that dopamine increases during cardiac arrest might cause hallucinations.

The paper here ("HUMAN BEHAVIOURAL AROUSAL INDUCED BY DOPAMINE") discusses experiments in which human subjects received dopamine infusions that increased their dopamine levels to as high as 1000 nanomoles per milliliter, which is a level more than 1000 times higher than normal. The paper fails to mention any hallucinations resulting. This is more evidence that it is senseless to try to speculate that dopamine spikes during cardiac arrest might explain near-death experiences.

One of the worst parts of the "A Neuroscientific Model of Near-Death Experiences" paper comes in a diagram in which there is a box marked "Evolutionary advantages," and we have a reference to "enabling the individual to cope with life-threatening or painful situations." Near-death experiences do nothing to increase the likelihood of surviving a life-threatening situation. Of course, someone undergoing cardiac arrest will not be more likely to survive if he has some mental experience of leaving his body while his heart has stopped. And if someone is drowning or freezing to death, it will not at all increase his chance of surviving if his life flashes before his eyes, or if he sees himself floating out of his body and encountering a mystical realm or a numinous mysterious light. Far from increasing survival rates during such events, a near-death experience would be a distraction that would lessen the chance that someone would focus on what he needs to do to save himself in such a situation. So all attempts to postulate some Darwinian "survival of the fittest" explanation for near-death experiences are nonsensical.

at July 15, 2025 1 comment:

Labels: near death experiences, out-of-body experiences

Friday, July 11, 2025

When Gaslighting Psychiatric Mudslinging Defames Healthy NDE and OBE Observers

In my 2023 post "Its News App Makes Apple Rather Like Orwell's Ministry of Truth" I complained about the appalling materialist bias of the Apple News app that is a core feature of the very widely used I-Pad device. I wrote this:

"This interface is a masterpiece from an ease-of-use standpoint. With this interface I can access many hundreds of stories on 30 or more topics without typing anything and without ever using a mouse. The News app of the Apple iPad is so easy to use, and has access to so many stories that I would imagine a typical iPad user probably spends 30% or more of his iPad time only using the News app.

But there is a huge problem with Apple's News app. The News app restricts you to a very limited number of information sources. It therefore acts as a very severe 'reality filter,' extremely restricting the type of articles that you will read when using its interface, and severely restricting the type of viewpoints you will be exposed to....

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- brain changes with age
- brain collections
- brain connectivity
- brain cyst
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- brain injury
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- CAMKII
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- claims of brain localization
- claims of chromatin involvement in memory
- claims of concept cells
- claims of concept-selective regions in the brain
- claims of epigenetic encoding of memory
- claims of mind reading by brain scans
- claims of neural correlates of love
- claims of neural correlates of memory activity
- claims of neural correlates of mental activity
- claims of neural representations
- claims that brains think
- clairvoyance
- conscious cells theory
- consciousness
- consciousness shadow-speaking
- corporate funding of neuroscientists
- COVID-19
- cryo-EM
- Darwinism

What Apple's News app has done is to pretty much restrict me to articles that parrot the 'official party line' of America's ruling class of politicians, professors and pundits, and also a vast variety of entertainment articles and articles such as sports articles and real estate articles and celebrity-oriented articles. What's wrong with that? Well, for one thing there is the problem that the stories that I get from the News app are very often stories filled with very bad falsehoods, misrepresentations and groundless boasts. This is largely because nowadays the articles of so-called 'science news' are very often articles filled with errors and misstatements."

In 2025 we had an example of the appalling materialist propaganda so common in the Apple News app. It was a Junk Medicine article offering very bad medical advice, and very bad misinformation on the topic of out-of-body experiences. The article was a very shameful example of gaslighting and psychiatric mudslinging, in which attempts are made to defame healthy observers, by trying to insinuate that they have mental problems.

The article started out with the false headline "75% of People Will Have an Out-of-Body Experience. How to Tell If You've Had One." The percentage cited is not correct. The table below lists various surveys trying to determine the percentage of people who have out-of-body experiences. The average percentage of people saying they had such experiences is about 25%.

Author	Year	Respondents	Size of sample	N 'YES'	% 'YES'
Hart	1954	Sociology students	113	28	25
		Sociology students	42	14	33
Green	1966	Southampton University students	115	22	19
	1967	Oxford University students	380	131	34
Palmer	1975	Charlottesville Townspeople	-	-	14
		Students	-	-	25
Tart	1971	Marijuana users	150	66	44
Haraldsson	1977	Icelanders	-	-	8
Blackmore	1980	Surrey University students	216	28	13
		Bristol University students	115	16	14
Irwin	1980	Australian students	177	36	20

From the very beginning, the article gives us false information. It starts out stating this: "Dissociation refers to an out-of-body experience that can make you feel detached from yourself or reality." No, dissociation is not an out-of-body experience.

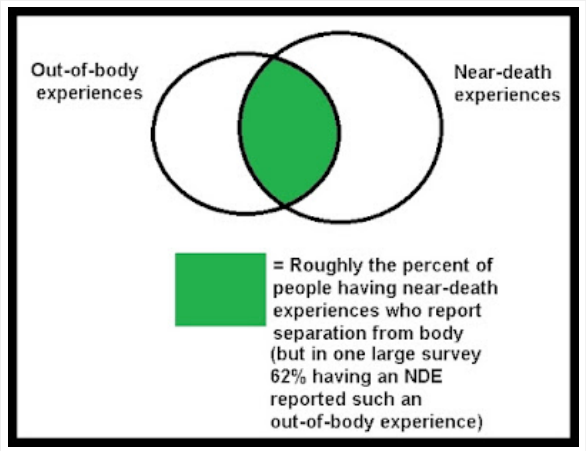
Below are some definitions of "dissociation":

- The Merriam-Webster dictionary defines "dissociation" as "The separation of whole segments of the personality (as in dissociative identity disorder) or of discrete mental processes (as in schizophrenia) from the mainstream of consciousness or of behavior."
- Asked for a definition of "dissociation," Google gives this: "Dissociation is a mental process where a person disconnects from their thoughts, feelings, memories, or sense of identity."

- default mode network
- dementia
- dendritic spines
- depression
- distributed recall hypothesis
- DNA
- dreams
- EEG studies
- eidetic memory
- emergence
- emergentism
- engram
- epigenetics
- epilepsy
- ESP
- evolution
- exceptional auditory memory
- exceptional mathematics ability
- exceptional memory
- exceptional multitasking
- exceptional musical memory
- exceptional reading ability
- exceptional recall of facts
- exceptional recall of number sequences
- exceptional recall of text sequences
- exceptional recognition memory
- exceptional speed of memorization
- exceptional speed of thinking
- exceptional time-related ability
- excessive and potentially hazardous brain scanning in neuroscience research
- extent of paranormal experience
- famous neuroscience case histories
- fastest memorizers
- feedback loops
- file drawer effect
- first rule of neural explanation
- fMRI
- free books by Mark Mahin
- free will
- free-exploratory neuroscience technique
- freezing behavior
- frontal lobes
- fusiform face area
- Gadolinium contrast agents
- gaslighting
- genes
- global workspace theory

- Psychiatry.org says, "Dissociation is a disconnection between a person's thoughts, memories, feelings, actions or sense of who he or she is."
- The American Psychological Association's dictionary defines dissociation as "a defense mechanism in which conflicting impulses are kept apart or threatening ideas and feelings are separated from the rest of the psyche."

None of these things have anything to do with an out-of-body experience. An out-of-body experience is an experience in which an observer says that he seemed to be outside of his physical body. Typically the beginning of such an experience involves viewing the body from outside it, from a position such as two meters away, or a position at the top of a ceiling. Out-of-body experiences typically occur as sudden surprises, and often are part of near-death experiences (which may or may not include an out-of-body experience). The diagram below shows the relation between out-of-body experiences and near-death experiences.


Out-of-body experiences
Near-death experiences
= Roughly the percent of people having near-death experiences who report separation from body (but in one large survey 62% having an NDE reported such an out-of-body experience)

An out-of-body experience very often occurs suddenly during some experience in which a person is having a close brush with death, such as when someone is having a heart attack or cardiac arrest. Other out-of-body experiences may occur suddenly when someone is not having a close encounter with death. For example, a person may wake up from sleep and be very surprised to find that he seems to be observing his body from outside of it. A small number of people claim to be able to have out-of-body experiences through conscious effort in which they are trying to have such experiences.

There is no evidence that out-of-body experiences have anything to do with any type of mental illness. But very shamefully, the Apple News article is all about trying to make people who have had out-of-body experiences think that they have some type of mental illness. It immediately gives us a section entitled "Symptoms" which includes these items:

- *"Feeling like you're outside of looking down at, or floating above your own body"*
- *"Apathy"*
- *"Emotional numbness"*
- *"Disconnection from those around you"*
- *"Feelings like your surroundings aren't real"*
- *"Time feels like it's moving too fast or too slow"*

- gnostic cells
- groupthink
- health hazards in neuroscience experiments
- hemispherectomy
- high mental function despite large brain damage
- hippocampus
- how to detect bad neuroscience
- HSAM (Highly Superior Autobiographical Memory)
- Human Brain Project
- hydrocephalus
- hyperlexia
- hyperscanning
- hyperthymesia
- hypnosis
- idea creation
- idealism
- imagination
- inappropriate neuroscience prize awards
- informed consent
- instincts
- integrated information theory
- intelligence after brain injury
- intelligence of animals with small brains
- interbrain synchrony
- IQ increase after brain tissue removal
- IQ increase after hemispherectomy
- keep-torturing-the-data-until-it-confesses tactics
- lack of corpus callosum
- lack of neural correlates of thinking
- lack of progress in cognitive neuroscience
- life review
- longtermism
- loss of cerebellum
- loss of corpus callosum
- loss of frontal lobes
- loss of half of brain
- loss of left half of brain
- loss of most of brain
- loss of right half of brain
- loss of temporal lobe
- low connectivity of brains
- low statistical power in neuroscience experiments
- LTP
- M. Mahin autobiographical sketch
- materialism

- *"Memory loss"*
- *"Not remembering how you got to a specific place"*
- *"Having flashbacks that feel like you're living them in the present moment"*
- *"Being absorbed in a fantasy-like world that feels real"*
- *"Hearing muffled voices or seeing bright lights"*
- *"Depressive moods"*
- *"Anxious thoughts"*

Notice the shameful strategy. In the bullet list some of the observational features of near-death experiences and out-of-body experiences are mixed up with various psychiatric symptoms. Similar shameful psychiatric mudslinging might go on if you were to have a bullet list listing mostly psychiatric symptoms, a list that included items such as "hoping that tax rates are increased on billionaires" and "worrying about the homeless," with the goal being to create the impression or insinuation that people with liberal or progressive ideas are mentally ill.

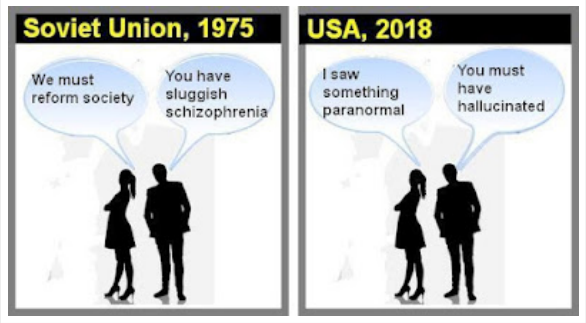
We are then told "dissociation can often be an underlying symptom of mental health conditions." We then have a "Causes" section that mostly lists a bunch of psychiatric conditions such a "dissociative identity disorder," "depersonalization/derealization disorder (DPDD)," "dissociative amnesia," "borderline personality disorder," "schizophrenia," "post-traumatic stress disorder (PTSD)," "depression," "panic disorder," "stress," and "epilepsy."

Then there's a Diagnosis section, in which the reader is instructed that if he is experiencing any of the items listed in the "Symptoms" section (which include some of the features of near-death experiences and out-of-body experiences), then he should go to his primary care physician so that such a doctor can refer him to a psychiatrist.

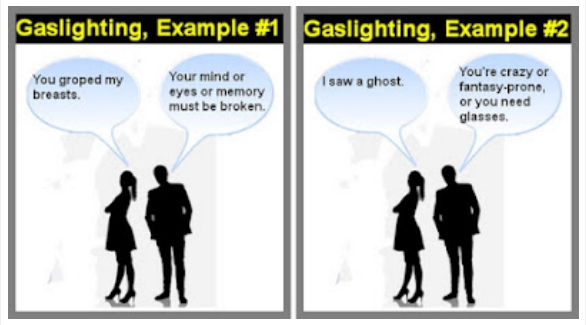
The article is the worst type of gaslighting and psychiatric mudslinging. The advice given is terrible junk-medicine advice. There is not the slightest reason why anyone having an out-of-body experience or a near-death experience should consult a psychiatrist. There is no evidence that such experiences are symptoms of any type of mental illness. The Apple News article provides no evidence whatsoever of an association between mental illness and either out-of-body experiences or near-death experiences. No such association exists. The people reporting near-death experiences and out-of-body experiences are in general normal and healthy people. There is no credible explanation of how any kind of mental illness could be the cause of their reports.

Sociologist Paige Sweet defines gaslighting as "making someone seem or feel unstable, irrational and not credible, making them feel like what they're seeing or experiencing isn't real, that they're making it up, that no one else will believe them." The visual below shows two examples of gaslighting:

- mechanistic biology
- memory after brain injury
- memory encoding
- memory maintenance
- memory recall
- memory storage
- mental focus
- mental illness
- methylation theory of memory storage
- microscopic analysis of brain tissue
- microtubules
- mind over matter
- mind uploading
- misleading visuals in brain imaging papers
- misstatements about neuroscience case histories
- molecular machinery
- morphogenesis
- Morris water maze
- multiple copies of a memory theory
- narrowness of neuroscientist studies
- natural selection
- near death experiences
- network neuroscience theory
- neural noise
- neuron nicknames
- neuroscience blogs
- neuroscience research endangering patients with brain problems
- neuroscientist confessions
- neuroscientist hand-waving
- neuroscientist pareidolia
- noise-mining
- non-local consciousness
- nonneuralism
- novelty preference technique
- opinion poll of neuroscientists
- optogenetics
- orchestrated objective reduction theory
- origin of biological complexity
- origin of man
- origin of Mind
- origin of minds
- out-of-body experiences
- overblown hype
- pain insensitivity
- panpsychism
- paranormal phenomena
- patient H.M.



The visual below shows two other examples of gaslighting:


Gaslighting, Example #1
You groped my breasts.
Your mind or eyes or memory must be broken.
Gaslighting, Example #2
I saw a ghost.
You're crazy or fantasy-prone, or you need glasses.

The type of gaslighting that has occurred in the Apple News article is the same type of shameful gaslighting that is practiced by the lawyers of rapists, who try various rhetorical tricks to try to make reliable rape victims sound like unreliable witnesses.

Similar to gaslighting is what we can call psychiatric mudslinging. Psychiatric mudslinging is an attempt to shame, defame or silence a witness by falsely trying to insinuate that the person has mental problems. When psychologists or psychiatrists engage in psychiatric mudslinging, they are abusing their professional skills, and betraying the public's trust of them. When psychiatric mudslinging occurs, someone who was trained to help people becomes like some sniper, trying to hurt people.

The author of the Apple News article should be deeply ashamed of having written this egregious piece of gaslighting and psychiatric mudslinging, as should a psychiatrist who has approved this Junk Medicine article trying to suggest that people having near-death experiences and out-of-body experiences

- patient K.C.
- pharmaceutical industry influence on neuroscience
- philosophy
- philosophy of biology
- philosophy of mind
- Phineas Gage
- photographic memory
- physical shortfalls of all brains
- physicalism
- PKMZ
- PKMzeta
- place cells
- post-hypnotic amnesia
- pre-1975 near-death experience
- pre-1975 out-of-body experience
- precognition
- predicting intelligence from brains
- predicting psychology from brains
- predictions
- prefrontal cortex
- preservation of learned knowledge after hemispherectomy
- preservation of learned knowledge after loss of much of brain
- preservation of learned knowledge in animals after brain tissue loss
- protein turnover
- psychiatric mudslinging
- psychiatry
- psychical research
- quantum mechanics
- questionable research practices
- recall of 50-year-old memories
- recall of long texts
- recommended books
- redundant memory storage
- relative ease of getting a neuroscience PhD
- reliable techniques for measuring recall in rodents
- remote viewing
- replication crisis
- research abuse of epileptics
- savants
- science academia resemblance to organized religion
- science journalism
- scientific consensus
- scientific fraud
- scientist misconduct
- sequential traversal of neurons

should seek psychiatric treatments, despite a lack of any evidence that such experiences are symptoms of mental problems. Financial conflicts-of-interest may explain the psychiatrist's action here. The more people go to psychiatrists, the more money psychiatrists make.

Another bogus article on out-of-body experiences is to be found in a recent university press release with the phony title "An Explanation for Out-of-Body Experiences." Count this as Example #1001 of a university press making utterly groundless boasts. What has gone on for years is that universities and colleges have been issuing groundless boasts and flagrantly untrue information in press releases designed to hype some newly released study done by scientists at such institutions. So, for example, if there is a University of Eastern California, the press office of such a university will tend to follow an "anything goes" policy when trying to publicize newly research done by scientists at such a university. Almost always, the press releases are anonymous without any named author. This allows some PR worker at a university press office to be uninhibited about lying, because he knows that no one will track him down as the person guilty of the lies he is telling.

We hear about a survey of 500 people, but we get no specific details about any results. The press release claims, "The scientists found that the OBE experiencers were more frequently diagnosed with mental health conditions than those who had not had an OBE." But we are given no data substantiating this claim. Claims like this are worthless unless you are told what a difference was. Were the OBE experiencers 5% more frequently diagnosed with mental health conditions, or was it only 1% more? We do not know, because no specific difference is mentioned.

We may safely assume that no significant difference was found, because whenever a study finds any kind of meaningful difference, it will almost always give us a specific number mentioning the difference. So, for example, if a scientist is doing some study testing whether pornography leads to criminality, and he finds a decent-sized difference such as 5%, he will almost always discuss the exact difference he found. The only time when scientists fail to list a specific difference is when they found some negligible "means nothing" difference such as 1% or 2%. Then typically the scientist will try to hide the trifling difference he found, by merely saying that he "found a difference" without telling what the difference was.

We are referred to a paper ("Are out-of-body experiences indicative of an underlying psychopathology?") behind a paywall, incorrectly described by the press release as an "Open Access" paper. The part of the paper that is publicly accessible consists of an abstract and some snippets. Neither of these mentions any specific difference between the mental health of those having out-of-body experiences and those not having them. The paper refers to "group difference in psychopathological profile between OBErs and non-OBErs" but gives us no specific data to indicate that those having out-of-body experiences are more likely to suffer mental health problems. The publicly accessible abstract and snippets of the paper states "we found that individuals reporting OBEs exhibited statistically worse mental health scores and a higher prevalence of psychiatric diagnoses compared to non-OBErs," failing to provide a single number to back up such claims.

- sharp wave ripples
- short lifetime of synapses
- short lifetimes of brain protein molecules
- short lifetimes of dendritic spines
- simulation hypothesis
- so-called psychiatric brain surgery
- sociology of science
- source of thoughts
- speed of human minds
- speed reading
- Spiritualism
- split-brain operation
- stem cells
- strokes
- synapse theory of memory
- synapses
- synaptic mapping
- synaptic plasticity
- synaptic turnover
- T-maze
- teleospiritism
- telomeres
- terminal lucidity
- top-down theory of mind
- transhumanism
- transposition of senses
- traumatic brain injury
- unnecessary brain scans
- unreliability of synaptic transmission
- unreliable neuroscience techniques
- vaccines
- videos
- visual recognition
- Y-mazes

It is the same rule for scientific paper abstracts as for press releases: almost invariably whenever a study finds any non-negligible numerical difference it was attempting to find, it will report in its abstract a specific figure telling us how much that difference was. Whenever a paper abstract or press release merely reports there was a difference without giving us any number telling us how much that difference was, we can assume with high confidence that the study found no difference worth mentioning, and that the authors were trying to prevent people from easily finding out about how tiny or negligible the difference was.

We can actually take the paper as rather good evidence that there is no difference between the mental health of those reporting out-of-body experiences and those not reporting them, on the grounds that the study failed to report in its abstract a specific numerical difference, which it only would have done if no difference or only the tiniest difference was found.

We should also realize that if some academic researchers were to find some small difference in mental health outcomes between those having an out-of-body experience and those not having such experiences, almost certainly the result would not be an indicator of any real difference in mental health, but instead merely a reflection of attempts to pathologize those reporting experiences that psychiatrists and psychologists cannot explain, and a reflection of bias against the objective analysis of such persons. For example, what is the result when psychiatrists produce biased types of surveys in which those confessing to facets of out-of-body experiences or near-death experiences are classified as having a higher pathology score? The result, of course, would be some ability to report a higher pathology for such people. Similarly, if psychologists are creating Political Anxiety Syndrome surveys in which confessing to be worried about homelessness and poverty causes you to score higher, then people caring about homelessness and poverty will be wrongly analyzed as people having more mental problems.

The paper here ("Measuring dissociation: Comparison of alternative forms of the dissociative experiences scale") gives us at its end the questions used for something called the Dissociative Experiences Scale, a questionnaire that is claimed to be a way of detecting a psychiatric syndrome called "dissociation." One of the questions asks about out-of-body experiences. The question is: "Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something and they actually see themselves as if they were looking at another person." People doing the survey are asked to rate how often this happens to them. Anyone having an out-of-experience would answer "Once" or "Sometimes" to such a question, causing them to get a non-zero score on such a scale. But this does nothing whatsoever to show any pathology of such people. It merely shows that people who have out-of-body experiences report out-of-body experiences. Trying to claim a non-zero score on such a survey is evidence of pathology is like creating a Liberal Pathology Syndrome questionnaire in which one of the questions asks "Do you sometimes worry about the suffering of homeless people," and then claiming that scores above zero on such a survey are evidence of mental pathology in liberals. That would be an extremely absurd methodology. All that such a survey would be showing is that people who care about the suffering of homeless people are people who care about the suffering of homeless people.

The same Dissociative Experiences Scale asks another question that will get a "Once" answer from very many people who have had near-death experiences. The question is "Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving that event." People having near-death experiences often report having a "life review" in which they briefly re-experience key moments of their lives, in some very sped-up manner. Anyone having such an experience might answer "Once" to such a survey item, even though they have no actual pathology.

In the press release of the "Are out-of-body experiences indicative of an underlying psychopathology?" paper we get some laughable nonsense about childhood trauma being an explanation for out-of-body experiences. It reminds me of similar rubbish that Sigmund Freud and his followers advanced for decades. Freud and the Freudians would again and again claim that some mental anomaly cropping up long after childhood was caused by childhood traumas such as the repression of a male patient's sexual lust for his mother. Freudianism is now regarded as a huge error and dead end by most psychologists. The idea that someone would have an experience of floating out of his body and viewing it from above because of some childhood trauma many years ago is an attempted explanation about as silly and stupid as you could make.

There is actually much evidence that near-death experiences and out-of-body experiences produce a beneficial effect on the minds of those who have them. I could provide endless examples of people who had such experiences and who claimed that their worldview had been deepened, and that they now regarded their existence as more meaningful than they previously realized. We read the following in one paper:

> "*Measures of traits and symptoms related to psychosis have failed to differentiate OB [out-of-body] experients from nonexperients (Gabbard & Twemlow, 1984; Irwin, 1980; McCreery & Claridge, 1995). McCreery (1993) found no relationship between the occurrence of OBEs and his participants' psychiatric histories. Gabbard and Twemlow (1984) concluded that 'the OBE group was significantly healthier than a variety of other normative groups in the population and did not have the constellation of symptoms often equated with character disorders, such as psychosomatic disorders, alcohol and drug abuse, or stimulus seeking' (p. 32)*"

The 2023 study "Incidence of near-death experiences in patients surviving a prolonged critical illness and their long-term impact: a prospective observational study" found that 19 out of 126 survivors of Intensive Care Unit hospitalization (15%) had a near-death experience. There was only a very low association between such experiences and positive responses on a Dissociative Experiences Scale questionnaire discussed above, with an odds ratio of only 1.13. The low association seems to argue against hallucinatory explanations for near-death experiences. Also, when we factor in that such a questionnaire is one that unfairly has two questions that might cause people having a near-death experience or out-of-body experience to score above 0 on such a scale, as mentioned above, we should suspect that the reported very low association is more like a zero association.

The Dissociative Experiences Scale has been criticized as an invalid survey asking questions about too many types of different experiences. A paper says, "Dissociative Disorders (DD) are perhaps the most controversial psychiatric diagnoses." The same paper tells us that half of the theorists of so-called dissociative disorders think that dissociative disorders are a "socio-cultural construct" and that people report having them mostly because of a kind of social contagion in which they have been encouraged to believe they have such a disorder.

Another type of psychiatrist survey promoting gaslighting, psychiatric mudslinging and weaponized psychology against healthy subjects is something called the Dissociative Disorders Interview Schedule or DDIS. Described here, it is a questionnaire that asks many questions. One of the questions (Question 64) asks whether you have experienced "having thoughts taken out of your mind." Another asks if you have ever experienced "thinking thoughts which seemed to be someone else's." Anyone having the extremely common and healthy human experience of ESP or telepathy might answer "yes" to such questions; but that would cause them to have a higher pathology rank on this poorly designed survey. The same survey asks as its Question 94, "Do you ever have memories come back to you all of a sudden, in a flood or like flashbacks?" The question would cause anyone reporting the common life review of near-death experiences to rate a higher score on this supposed test for "dissociation." Then there are Questions 100 to 107, which will cause anyone having any of many different paranormal experiences to score high on this supposed test of dissociation. The questionnaire is a blatant example of specialists trying to engage in gaslighting, psychiatric mudslinging and weaponized psychology; and it is also a blatant example of when medicine goes astray because people are trying to wage ideological warfare against observational reports that offend them.

We should not have any trust in any claims of "higher dissociative disorder" obtained by the use of techniques such as this appalling "pathologize the spooky" junk medicine "Dissociative Disorders Interview Schedule" (DDIS) or the not-as-bad but also very faulty "Dissociative Experiences Scale."

We may reasonably wonder whether something like this ever went on in someone's mind:

Materialist Jim: *I'm so sick of hearing about all those apparitions sightings, out-of-body experiences and near-death experiences! Many people say they disprove my cherished belief that I am just a brain, not a soul.*

But wait a second. I think there's a way to fight such accounts! The key is make it look like the people reporting such things are crazy.

I can just create some "Official Survey" I can say is a questionnaire designed to detect signs of mental illness. Some of the questions will ask people if they ever experienced things just like what is reported in apparition sightings, near-death experiences or out-of-body experiences. Any "yes" answer will create a score above zero, providing what we can call evidence of mental illness.

The current reigning "manual of psychiatry" (the DSM-5) has only one sentence referring to out-of-body experiences, a mere passing reference. The

authors of the manual show zero signs of having studied this complex phenomenon, and do nothing to substantiate any claim that it is associated with mental illness. A paper on the DSM-5 manual states this:

"The DSM-5 perpetuates some of the problems of previous editions and creates some new ones. The new definition of mental disorder is tautological, encourages reification and circular reasoning, and creates nine new distinct pathways whereby a client can be diagnosed with a mental illness, absent any scientific breakthroughs that would justify this new definition. Conditions with clearly established organic etiologies continue to be labeled as mental disorders... Fundamental errors in logical reasoning appear to form the manual's conceptual foundation. The DSM-5 unjustifiably expands to scope of practice of psychiatry by pathologizing normative reactions to environmental stresses and one's personal learning history. Heterogeneously presenting conditions are collapsed into singular categories of mental disorder, which confuses the assessment and diagnostic process, and deflects attention away from demonstrable person-in-environment variables to hypothetical inner causes. One consequence of these problems is an unwarranted focus on treating mental disorders via medications and other somatic therapies said to impact the client's mind, as opposed to improving the client's ability to effectively y engage the environment reducing the level of stressful and aversive encounters....With time, we may look back on the current mania for psychotropic treatment, aided and abetted by the DSM-5, with the same sense of incredulity and horror that we now read about ovariectomies, nasal cauterizations, teeth extractions, and lobotomies [previous bungling psychiatric treatment techniques]."

Very many have complained that the diagnostic categories in the DSM-5 are largely arbitrary and dubious social constructs of some small committee, and that many of the claimed syndromes have no clear and distinct observational basis or known biological cause.

We have another example of gaslighting and psychiatric mudslinging in the paper "The Creative Experiences Questionnaire (CEQ): a brief self-report measure of fantasy proneness." We have a questionnaire that is billed as something measuring "fantasy proneness." Among the 25 questions are questions in which people are asked whether they agree with these statements:

- "I sometimes feel that I have had an out-of-body experience."
- "During my life I have had intense religious experiences which influenced me in a very strong manner."
- "I often have the experience of thinking of someone and soon afterwards that person calls or shows up."

Each of these three items is a normal, healthy type of human experience that has nothing to do with "fantasy proneness." The only reason you would include such items on a scientific survey would be to do gaslighting and psychiatric mudslinging, to try and defame certain witnesses by branding them as "fantasy prone." We have an appalling use of the survey in the gaslighting paper here, which improperly compares the responses to the survey of those having near-death experiences to a control group of 100 subjects, ignoring the much larger survey group of 332 subjects discussed in the paper introducing the survey. If the average score of the subjects in that larger group (a score about 9) had been used, the gaslighting paper would not have been able to

report any evidence that those having near-death experiences are more "fantasy prone."

All of the people who engaged in the type of gaslighting and psychiatric mudslinging described above should be ashamed of abusing their positions to engage in this type of groundless character assassination. They have done nothing to show pathology in those having near-death experiences or out-of-body experiences or other common types of paranormal experiences, but may have done something to demonstrate a little pathology in their own minds or ethics.

Page 138 of the 2025 research document here gives us an idea of how unfounded are attempts to associate reports of the paranormal with mental pathology:

" *At that time, 1500 people from a representative sample were interviewed by telephone about the conceivability of paranormal phenomena and about personal paranormal experiences. The openness to paranormal phenomena was high, and more than 50% of the Germans had already had a paranormal experience in their lives (e.g., ESP-dream, coincidence, apparition of the dead, or observation of an UFO). Statistically at least, we were able to establish that the paranormal is quite normal and our findings are in line with comparable results from other country studies in Europe and the USA; e.g. Castro, Burrows & Wooffitt, 2014; Greeley, 1975.* ***In addition, there was a rather relaxed approach to the extraordinary experiences, which were often reported anecdotally and described as life-enriching. Very rarely were these experiences associated with 'existential shock' or the need for therapeutic counselling."***

at July 11, 2025 1 comment:

Labels: bad psychiatric surveys, bad psychiatry, gaslighting, near death experiences, out-of-body experiences, psychiatric mudslinging, psychiatry

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Monday, June 9, 2025

The Groundless Myth That "Floods"' or "Surges" Help Explain Near-Death Experiences

The phenomena of near-death experiences and out-of-body experiences are strong evidence against a cherished claim of neuroscientists, the claim that your brain is the source of your mind. During near-death experiences and out-of-body experiences arising during cardiac arrest when brain activity flatlines, people often report having the most vivid experiences in which they observe their bodies from outside of the bodies. No such thing should ever occur if your brain is the source of your mind. Under the idea that your brain is the source of your mind, nothing but unconsciousness should result from a state of cardiac arrest in which brain signals flatline. And if the brain is the source of your mind, no one should ever observe his body from a viewing position meters away from the body, something commonly reported in near-death experiences and out-of-body experiences.

To try and combat this evidence which so clearly refutes their most cherished dogmas, neuroscientists and materialists have resorted to spreading myths. There is the flood myth and the surge myth.

The Flood Myth

DMT is some molecule that can produce hallucinations in humans. The main type of flood myth regarding near-death experiences is the utterly fictional claim that there occurs a flood of DMT or some other relevant chemicals when a person is dying. There is no scientific evidence for any such thing occurring in any organism. It is sometimes claimed that some study showed that a flood of DMT occurs in rats when they die. The claim has no basis in fact.

The wikipedia.org article on DMT makes this claim: "A significant increase of DMT levels in the rat visual cortex was observed following induction of experimental cardiac arrest, a finding independent of an intact pineal gland." The statement is based on a paper that failed to show any robust of such a thing. The paper is the paper "Biosynthesis and Extracellular Concentrations of N,N-dimethyltryptamine (DMT) in Mammalian Brain," which you can read here. Figure 4 of the paper has a graph that claims to show DMT levels in the brain of rats during normal times and during cardiac arrest. We see only negligible levels in both cases. The graph is below:

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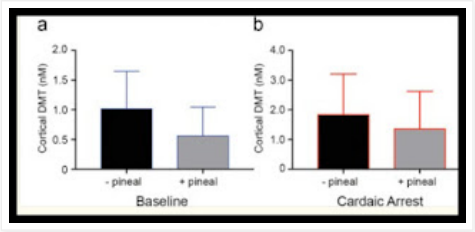
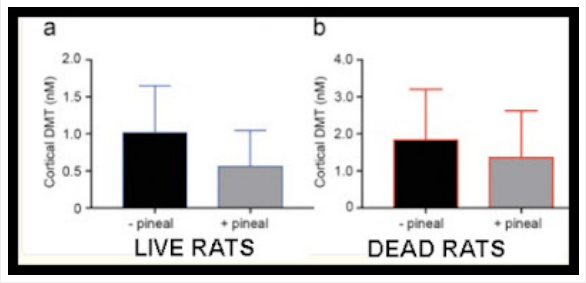


The nM on the left scale stands for nanomoles. The claimed amount in both cases is the negligible amount of only 1 or 2 nanomoles, something like about 1 billionth of a gram. The "cardiac arrest" part of the graph is misleading. The measurement was not made during cardiac arrest. This should come as no surprise when you consider that cardiac arrest quickly kills an organism, within a few minutes, unless it is stopped. Within the few minutes of cardiac arrest, there would never be time to reliably make some very delicate measure of some tiniest trace amount of a few nanomoles.

A reading of the full caption of the figure above gives us the truth. The claimed measurement of DMT in rats did not actually occur during cardiac arrest, but between 30 minutes and an hour after cardiac arrest. So the "cardiac arrest" in the graph is misleading. The graph should have been labeled like this.



Should we have any confidence in the reliability of this claimed measurement, given the failure of the authors to correctly label their graph? There are three reasons we should not:

(1) The failure to correctly label the graph should cause us to doubt the reliability of the investigation.
(2) The reported levels are so very low that they almost certainly fall within the measurement uncertainty of whatever measurement technique was used. We cannot even have confidence that there is any DMT at all in any of these rats.
(3) The authors fail to mention any use of a blinding protocol, and their paper fails to use the word "blind" or "blinding." The very tiny difference reported is so small it can easily be explained by merely assuming that when the investigators studied the dead rats, they were more prone to report finding DMT, because of their desire to show some effect of DMT increasing when a rat dies.

In short, we have no robust evidence here of anything that can reasonably be called a surge or a flood or even a significant increase in DMT levels in dying rats. No reliable evidence has been provided that DMT levels increase in rats when they undergo cardiac arrest. Claims of a flood of DMT in rats undergoing cardiac arrest are lies.

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The question of DMT in the brain was clarified by David E. Nichols in a paper he authored in the Journal of Psychopharmocology. Speaking of DMT (also known as N,N-dimethyltryptamine) in the paper Nichols says, “It is clear that very minute concentrations of N,N-dimethyltryptamine have been detected in the brain, but they are not sufficient to produce psychoactive effects.” Addressing speculations that DMT is produced by the tiny pea-sized pineal gland in the brain, Nichols points out that the main purpose of the pineal gland is to produce melatonin, but the pineal gland only produces 30 micrograms of melatonin per day. But the pineal gland would need to produce about 20 milligrams of DMT (about 660 times more than 30 micrograms) to produce a mystical or hallucinatory experience. “The rational scientist will recognize that it is simply impossible for the pineal gland to accomplish such a heroic biochemical feat,” says Nichols. In the article in which he states that, it is noted that “DMT is rapidly broken down by monoamine oxidase (MAO) and there is no evidence that the drug can naturally accumulate within the brain.” Strassman attempted to detect DMT in the brains of 10 human corpses, but was not able to find any.

Given these facts, it is quite absurd to suggest that near-death experiences are being produced by DMT in the brain. Judging from the amount of DMT in rat brains, we have about 100,000 times too little DMT in our bodies for DMT-produced experiences to appear. Web pages speculating that near-death experiences may be produced by DMT will typically tell us that DMT has been detected in rat brains, failing to tell us how much DMT was detected (merely trace levels 100,000 times too small to produce any remarkable mental experiences).

The latest news story to repeat the false claim about a flood of brain chemicals at the time of death is a very recent BBC Science Focus article "What Is It Like to Die? The Reassuring Science of Near-Death Experiences." After a bogus section header of "A Huge Release of Chemicals," the BBC article claims this:

"For instance, Borjigin's team have previously studied rats in a state of asphyxia (a lack of oxygen in the brain – comparable to when a human has a heart attack) and found that this triggered a sudden release of brain chemicals, including adenosine, dopamine, norepinephrine, gamma-aminobutyric acid, glutamate and aspartate. Serotonin also surged to 20 times its normal levels within just two minutes of asphyxiation. Given the key roles these chemicals play in emotions and dream-like states, scientists suggest that this swell in neurotransmitters may contribute to the intense subjective experiences reported by people who undergo NDEs."

The paper the article referred to is the 2015 Borjigin paper Borjigin "Asphyxia-activated corticocardiac signaling accelerates onset of cardiac arrest," which is a low-quality study. The main reason that the study is not reliable experimental science is that it uses a way-too-small study group size of only 7 rodents. To be robust evidence, experimental studies attempting to show the effects of interventions in rodents require a sample size of at least 15 or 20 rodents per study group, and almost always a much larger number of rodents. When such

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experimental studies use only much smaller study group sizes such as 7 rodents per study group, they in general deserve only scorn, particularly when they are guilty of two failures this paper was guilty of: a failure to follow a blinding protocol, and a failure to report a sample size calculation (which typically occurs when experimenters know the study group sizes are way too small).

Another reason why this paper is not reliable evidence for any surge of chemicals in dying rodents is that it was attempting to do something that could not reliably be done in 2015: to track changes in levels of brain chemicals existing in only the tiniest trace amounts, over a time period of a few minutes. There did not exist in 2015 any technology capable of reliably tracking such chemicals over so short a time span. The relevant graph in the paper is Figure 4. There we see a graph purporting to track some brain chemicals existing at levels of only about 20 nanomoles. That's an incredibly tiny amount. In 2015 there did not exist any technology capable of reliably tracking changes in brain chemicals existing in such tiny amounts, over the span of a few minutes. The authors state, "To probe the neurochemical basis of the heightened cortical activities, we performed minute-by-minute microdialysis in the frontal and occipital lobes of unanesthetized rats (n = 7) before and during asphyxiation and analyzed cortical dialysates using liquid chromatography-mass spectrometry (LC-MS)." In 2015 that was not a reliable technology for tracking changes in minute traces of neurotransmitters in rodents over a period of a few minutes, particularly when using a way-too-small study group size such as only 7 rodents. For more on the unreliability of such claimed measurements, see the appendix of this post. None of the supposedly increasing chemicals listed in this 2015 paper are hallucinogens, so it makes no sense for the BBC Science Focus article to be claiming they have relevance to explaining near-death experiences.

The recent BBC article is guilty of a particularly misleading claim by using the header "A Huge Release of Chemicals." The actual release of chemicals reported in the low-quality paper it cites is a level of something like 20 nanomoles, only the tiniest trace amount, something like 20 parts per billion. Calling that a "huge release of chemicals" is like calling a millionth of a raindrop a rain storm.

The Surge Myth

What we can call the surge myth is the utterly fictional claim that there is a surge of some type of brain activity when a person undergoes cardiac arrest. The claim is the exact opposite of the truth.

The claim seems to have got started after the publication of a 2013 paper with the misleading title "Surge of neurophysiological coherence and connectivity in the dying brain." The paper was based on EEG readings of dying rats. An EEG is a device for measuring brain waves, one requiring the attachment of multiple electrodes on the head.

95% of the people reading a title of "Surge of neurophysiological coherence and connectivity in the dying brain" will think that some indication was found of increased cognitive activity in dying brains. The paper found no such thing. The "coherence" and "connectivity" supposedly found was not a surge but merely a momentary blip, and it did not involve anything like some surge of mental activity. Nothing whatsoever was found that can help to give a neural explanation for near-death experiences. In fact, there is every reason to think

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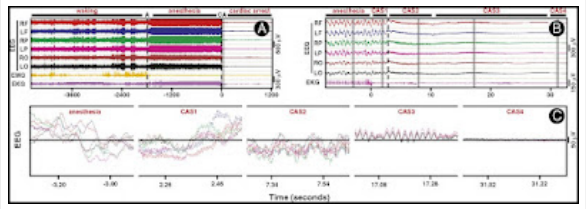
that at the time when this little blip of claimed "coherence" and "connectivity" occurred, all of the rats were unconscious.

Figure 1 of the paper is shown below. We see EEG brain wave signals from rats who were injected with a chemical causing the heart to stop.



Nothing impressive is seen. It's just what you would expect: brain signals trailing off and dying out very quickly after the heart stops. This data offers no justification for a title of "Surge of neurophysiological coherence and connectivity in the dying brain." An honest title of the paper would have been: "Brain waves very quickly trail off and die out after hearts stop in rats."

After this paper with a very misleading title was published, we had innumerable misleading citations of it in the articles of materialist or mainstream writers, claiming or insinuating that the paper showed or suggested something it did not either show or suggest. An example was a National Geographic article with the misleading title "In Dying Brains, Signs of Heightened Consciousness." The 2013 "Surge of neurophysiological coherence and connectivity in the dying brain" paper had not anything whatsoever to show "signs of heightened consciousness" in the dying rats it studied. Similarly, a 2017 Big Think article linked to the 2013 paper and claimed, "One 2013 study, which examined electrical signals inside the heads of rats, found that the rodents entered a hyper-alert state just before death." This claim is totally false, and the paper suggested nothing of the sort.

A 2023 paper discussed brain readings of coma patients in Michigan, USA who had their life-support systems turned off. Like the rat death paper described above, the paper had a misleading use of the word "surge." I previously described this paper like this:

- "**Surge of neurophysiological coupling and connectivity of gamma oscillations in the dying human brain.**" Here we have another misleading use of the word "surge" in a science paper headline, a paper co-authored by one of the researchers who authored the equally mistitled rat study "Surge of neurophysiological coherence and connectivity in the dying brain." The paper merely describes a little brain activity in two people after a respirator was turned off, with no evidence of brain activity continuing for more than a few seconds after the heart has stopped. The lines on brain waves charts go up and down, and there are seven or so channels of brain waves (including a gamma channel); so at any second you can usually find some little line going up and call that a "surge," although at the same time other lines (representing other brain wave channels) will probably be going down. Using the term "surge" in the title of the paper was misleading, rather like tracking the price of Microsoft, seeing it go up 2% at 2:00, and calling that a surge. The authors of the study did not even report a surge in gamma waves, one of the brain

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- "Thousands of Participants Are Needed for Accurate Results," But Most Brain Scan Studies Don't Even Use Dozens
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- "Brains Make Minds" Idea Flunks an Audit of a Large Brain Scan Database
- Big Study Finds Brain Gray Matter and Cortical Thickness Peak at Age 6 or Earlier, Contradicting Brain Dogmas
- Why the "A Memory Is Stored Throughout the Brain" Idea Makes Things Much Worse
- Principles of a Post-Materialist Science
- EEG Studies Fail to Provide Robust Evidence That Brains Think or Retrieve Memories
- Seven Things in Fast Retrieval Systems, None of Which Your Brain Has
- Studies Debunk Hippocampus Memory Myths
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> wave channels. Eager to get something they could call a surge, the authors got their little "surge" after some statistical fiddling with the signals, to get some statistical measure that only shows up after arbitrary analytics. Almost any random ten seconds of brain wave activity can be statistically analyzed to show a little "surge" somewhere, if you're willing to dredge up secondary statistical measures. Keep torturing the data, and it will confess as you wish. Shamefully, the journal Science has an article on this paper with the misleading headline "Burst of brain activity during dying could explain life passing before your eyes"; and the Smithsonian site has an equally misleading click-bait headline of "Surging Brain Activity in Dying People May Be a Sign of Near-Death Experiences." There is no evidence that either of these two people had an experience of "life passing before their eyes" or anything like near-death experiences. The subjects were unconscious when the respirator was turned off, and there is no evidence of any consciousness. Unconscious people have gamma wave activity (the activity reported), and you have plenty of gamma activity while you are sleeping. No "neural correlates of the NDE" were reported by the paper. As two MDs point out in a commentary on this paper, "The researchers reported no evidence whatsoever that these brain activities were correlated with conscious experiences in those two patients—and no reason to compare these results with prospective NDE studies in patients who have survived a cardiac arrest."

Innumerable false claims have appeared in the press based on these papers which made misleading uses of the word "surge" in their titles. What we have is a "give them an inch, and they'll take a mile" situation. Materialists are very eager consumers for any tiny scrap that may sound like something offering the faintest hope of some neural explanation for near-death experiences. So when a neuroscientist incorrectly uses the term "surge" in describing momentary blips that are not actual surges, then there may occur a "give them an inch, and they'll take a mile" effect, and before long the press may be talking all over the place about a surge of brain activity in dying patients. Such claims are lies. What actually happens to brains when cardiac arrest occurs is the exact opposite of a surge in brain activity.

The latest news story to repeat the false claim about a surge in brain activity at the time of death is a very recent BBC Science Focus article "What Is It Like to Die? The Reassuring Science of Near-Death Experiences." The article makes this false claim: "Led by Dr. Jimo Borjigin, the team made the remarkable observation that two of the patients observed a surge of brain activity after their relatives had agreed to the removal of life support." The untrue claim is similar to equally bogus claims made by the British newspaper The Guardian. For a very detailed discussion of the untrue claims that this newspaper made on this topic and about these two patients who had no such surges of brain activity, read my widely read post here. I was invited by someone at a science journal to turn that post into a scientific paper, but I declined because I prefer to keep my writings entirely on my blog sites so that everyone can read them for free, without encountering any paywall or advertisements. There was no such surge of brain activity in any such patients studied by the paper mentioned.

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- Exceptionally Fast Thinking Cannot Be Explained by Slow Brains Like We All Have
- Scientists and Clergy Have Much in Common
- 30 Things That Would Never Occur If Prevailing Neuroscientist Dogmas

The term "isoelectric" or iso-electric in reference to brain waves means a flat-lining equivalent to no electrical activity in the brain, as measured by EEG readings. The paper here states, "Within 10 to 40 seconds after circulatory arrest the EEG becomes iso-electric." Figure 1 of the paper here says that such an isoelectric flat-lining occurred within 26 seconds after the start of ventricular fibrillation, the "V-fib" that is a common cause of sudden cardiac death, with "cortical activity absent." Also referring to a flat-lining of brain waves meaning a stopping of brain electrical activity, another scientific paper says, "several studies have shown that EEG becomes isoelectric within 15 s [seconds] after ischemia [heart stopping] without a significant decrease in ATP level (Naritomi et al., 1988; Alger et al., 1989)." Another paper tells us this about brain waves and infarction (obstruction of blood flow), using CBF to mean cerebral blood flow, and the phrase "the EEG becomes isoelectric" to mean a flat-lining of brain electrical signals:

"*When normal CBF declines, the EEG first loses the higher frequencies (alpha and beta bands), while the lower frequencies (delta and theta bands) gradually increase. When the CBF decreases further towards an infarction threshold, the EEG becomes isoelectric."*

Similarly, another paper refers to blood pressure, and tells us, "When flow is below 20 mL/100 g/min (60% below normal), EEG becomes isoelectric." meaning that brain electrical activity flat-lines. The 85-page "Cerebral Protection" document here states, "During cardiac arrest, the EEG becomes isoelectric within 20-30 sec and this persists for several minutes after resuscitation." Another scientific paper states this:

"Of importance, during cardiac arrest, chest compliance is not confounded by muscle activity. The EEG becomes isoelectric within 15 to 20 seconds, and the patient becomes flaccid (Clark, 1992; Bang, 2003)."

You can find quite a few additional papers asserting that brains flat-line very quickly after cardiac arrest by doing Google or Google Scholar searches for the phrase "EEG becomes isoelectric" or "EEG becomes iso-electric."

A recent scientific paper referring to EEG readings of brain waves states this:

"The trajectory of EEG activity following cardiac arrest is both well defined and simple. It consists of an almost immediate decline in EEG power, which culminates in a state of isoelectricity [flatlining] within 20 s [seconds]."

The paper refers to three studies "where gamma oscillations are essentially or mostly artifactual and non-functional biorhythms masquerading as authentic EEG signals," noting how such oscillations can be produced by muscle movements. The paper concludes by saying this about the blips reported in the papers with "surge" in their titles: "Regardless of what the electrogenesis of the gamma spikes ultimately turns out to be, it is highly unlikely that they could be responsible for generating an NDE [near-death experience]."

A recent new study I discuss here gives us additional evidence that at death brain waves flatline, the exact opposite of undergoing some surge in activity.

We have seen above how mainstream news sources tend to be utterly unreliable in their coverage of neuroscience attempts to explain near-death experiences. The same BBC Science Focus site that misinformed us so badly

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- Neuroscientists Keep Wrongly Assuming the Source of Something Must Be Near Its Observed Manifestations
- The Vague Unfounded Boasts of Biology Sound Like the Vague Unfounded Boasts of Astrophysics
- 8 Reasons for Doubting Claims of the Heritability of Intelligence
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- Exhibit A Suggesting Scientists Don't Know How a Brain Could Retrieve a Memory
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- Cryogenic Electron Microscopy Helps Clarify Synapses Bear No Resemblance to Information Storage Structures
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- The Latest Evidence That Scientists Trying to Explain Memory Creation

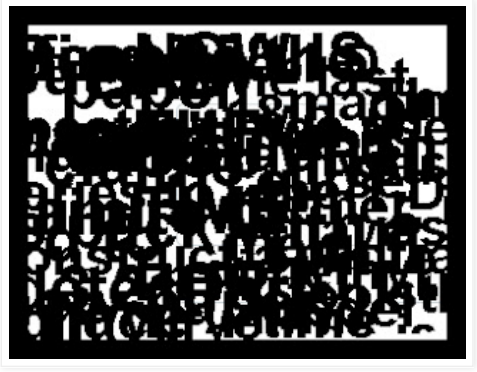
on this topic (as described above) is a site that has recently been guilty of very bogus science-related headlines, as I document in my post here.

Appendix: The 2015 paper mentioned above entitled "Asphyxia-activated corticocardiac signaling accelerates onset of cardiac arrest" claimed to use a technology called liquid chromatography-mass spectrometry (LC-MS). In 2015 there did not exist any technology for reliably tracking changes over a few minutes in neurotransmitters such as serotonin existing in only the tiniest trace amounts such as a few nanomoles. The pitfalls of this LC-MS technology are discussed in the 2012 paper here ("Pitfalls Associated with the Use of Liquid Chromatography–Tandem Mass Spectrometry in the Clinical Laboratory"), which states this:

"However, application of this technology is not automatically or necessarily translated into accurate results. Its pitfalls have to be recognized and must be addressed systematically. In particular interferences from in-source transformation of metabolites, differential matrix effects of analyte and internal standard and isobaric transitions can lead to inaccurate results of LC-MS/MS analyses."

Mass spectrometry does not measure the levels of neurotransmitters in a sample. As a wikipedia.org article tells us, "Mass spectrometry (MS) is an analytical technique that measures the mass-to-charge ratio (m/z) of charged particles (ions)." Attempting to deduce changes in the level of a particular neurotransmitter chemical (over a time span of a few minutes) from mass spectrometry readings would involve guesswork and some complex and largely arbitrary analysis pathway that would be very hard to get right.

To get an analogy what it is like for some scientists trying to find traces of neurotransmitters by analyzing mass spectroscopy data from the brain of a rodent, consider the visual below:



This text consists of many different sentences, overlaid on top of each other. Imagine trying to extract a particular word from such a mess. That's pretty much impossible. It's a similar deal for a scientist analyzing mass spectroscopy data derived from the tiny brain of a rodent, because what such a person gets is signals from many different elements and compounds and chemicals, arriving all at once. Unless you are very lucky, there is almost no way to reliably extract which part is a signal from which chemical, compound or element. But with a mess like a neuroscientist gets in such a situation (or a mess like the one shown above), there are unlimited opportunities to see what you are fervently hoping to see. All that can be truthfully said about such a

Are Lost in the Woods

- Study Suggests Massive Faking in Neuroscience Papers
- How Neuroscientists and Science Writers Try to Fool You Into Thinking Brains Store Memories
- Some People Our Neuroscientsts Don't Want You to Know About
- 10 Reasons Synapses Cannot Be a Storage Place for Human Memories
- Why Most Correlation-Fishing Experimental Neuroscience Is Worthless
- Pharmaceutical Company Entanglements Cloud the Objectivity of Neuroscientists and Psychiatrists
- The 4 Nonsensical Parts of the Tale Your Brain Instantly Retrieved an Answer Learned Long Ago
- Neuroscientists Don't Seem Like Paragons of Diligence
- "Brain Is the Most Complex Object in Universe" Claim Exemplifies Credulity About Brain Claims
- Exhibit A That Scientists Have No Understanding of a Physical Basis of Human Memory
- Goofs of the Site Brainfacts.org
- Shady Tricks Used by Writers About the Brain
- The 11 Biggest Neural Shortfalls Hinting Brains Don't Make Minds
- Analysis of 23,810 Brain Scans Finds "Neither Structural Nor Functional Imaging Predicted Individual Psychology"
- All Papers Relying on Rodent "Freezing Behavior" Estimations Are Junk Science
- The Human Brain Project Spent Billions, But Failed to Bolster Claims About Brains Making Minds
- Hydrocephalus Studies Confirming Low Correlation Between Brain States and Intelligence
- The Lack of Evidence That Brains Produce Dreaming, and Some Evidence Hinting They Don't
- How the Academia-Cyberspace-Pharmaceutical-Biotech-Publishing Complex Incentivizes Bad Brain Research
- The Lack of Correlation Between Most Mental Illness and Brain States
- They Stored and Studied Thousands of Brains, But Still Failed to Show Mental Illness Comes From Sick Brains
- They Stored and Studied Thousands of Brains, But Still Failed to Show Brains Store Memories

mess is something like this: "The data is too noisy for me to say much of anything reliable about it."

We have seen the pitfalls of mass spectrometry analysis claiming tiniest trace amounts in the recent K2-18b affair, in which overeager scientists claimed to have found something called dimethyl sulfide in the tiniest trace amounts in a planet in another solar system. As discussed here, the claims were soon discredited by other scientists who basically said: no, your data did not show any such thing.

The LC-MS/MS technology was not designed for analyzing real-time changes over a short time span such as a few minutes. It was instead designed for a more leisurely type of analysis such as determining what is in a static sample of something. Any claims of using such a technology in 2015 for real-time analysis of very short term *in vivo* changes in blood levels of neurotransmitters (over a time span of a few minutes) should be regarded with the great suspicion. To have any confidence in such claims, you would need to have best practices such as sufficient study group sizes and the use of a blinding protocol. Neither occurred in the 2015 paper "Asphyxia-activated corticocardiac signaling accelerates onset of cardiac arrest." The paper makes no mention of using any blinding protocol.

We can make a good guess about what probably went on. One or more analysts motivated to report some increase in neurotransmitters in dying rodents analyzed some mass spectroscopy data that could be analyzed in a 1001 conflicting ways, and then claimed to see the desired result. Such an event has little value as evidence. There might have some good evidence of neurotransmitter levels if you had used a much larger number of rodents, and given the mass spectroscopy data to some independent analyst, asking him, "Tell me if you can find any reliable evidence of any chemicals, and how much of such things you see."

It takes the human body hours or days to produce the most minute generation of the tiniest amounts of chemicals such as melatonin and serotonin. The human body produces about 30 micrograms (millionth of a gram) of melatonin daily. Rates of serotonin production in the brain are estimated at about 70 picomoles per gram per minute, which is some extremely minute amount like .000000000070 of a gram. There is no credible mechanism by which an organism could produce any strong increase in very-hard-to-produce neurotransmitters such as serotonin over the course of only a few minutes, as something like a response to death or a loss of oxygen or a stopping of a heart. If readings were to show a difference of, say, 300% over such a short interval of a few minutes, by far the best explanation would be the uncertainty and error levels and subjectivity of the claimed readings, rather than any actual increase over so short a time, which would not be time for any substantial increase. When you are attempting to measure in a tight time frame the levels of chemicals existing in only the tiniest trace amounts, the uncertainty from one attempted reading to another can easily be something like 1000%.

A 2022 article mentions some new technology for measuring in real time changes in neurotransmitters such as serotonin. The article speaks just as if no such technology existed prior to 2022, which should make us further doubt year 2015 claims about neurotransmitter changes occurring at the minutes around death. It states this:

- Major Journal Suggests 3% of Biology Papers Look Like Paper Mill Junk
- This Is What Built the Mighty Castle of Materialism
- Comparing the Dogmas of Cosmology and Biology
- Why Scientific Academia Is Like an Organized Religion
- How to Interview an Overconfident Biologist
- Neuroscientists Claim "Drifting Representations," But It's Mainly Just Their Pareidolia
- Neuroscience "Best of 2023" Reviews Suggests They're Getting Nowhere Trying to Explain Minds by Neural Explanations
- Convoluted "Spaghetti Code" Analysis Pathways Help Neuroscientists Conjure Phantasms That Don't Exist
- 50 Types of Questionable Research Practices
- Cox's Cases Were Better Explained as Evidence Brains Don't Make Minds
- No, Scientist, That Isn't Human Memory or Brain Action, But Merely Computer Activity
- You Would Never Guess From Her Videos That She Has No Frontal Lobes
- Neuroscientists Often Sound Like They Never Seriously Studied Psychical Research
- DNA Is Not a Blueprint, So "All Bets Are Off" About Body Origins and Mind Origins
- Universities Continue to Boast About Pitifully Weak Neuroscience Results
- A Biochemist's Promissory Note About Explaining Minds Sounds Very Lame
- No One Is Actually Doing Thought-Reading by Scanning Brains or Reading Brain Signals
- A Biologist Calls "Orthodox Science" a "Religion" and "Belief System"
- She Has Photographic Memory and Severe Unmanageable Epilepsy
- Traumatic Brain Injury Results Clashing With Prevailing Dogmas About Brains
- "Cells With Minds" Theory Is As Bad As "Brains Make Minds" Theory
- Surprising Studies on Memory Loss or IQ Changes After Brain Surgery or Brain Damage
- Pareidolia Helps Neuroscientists Getting Nowhere Trying to Show a Brain Basis for Memory

"Now, for the first time, UCLA scientists have attached nanoscale biochemical sensors, which are tuned to identify specific neurotransmitters, to a soft, implantable brain probe in order to continuously monitor these chemicals in real time. The new brain probe, described in a paper published in ACS Sensors, would allow scientists to track neurotransmitters in laboratory animals — and, ultimately, humans — during their day-to-day activities.

The ability to continuously measure neurotransmitters in high resolution over long periods would provide a more accurate understanding of how serotonin, dopamine and other neurotransmitters affect psychological states, potentially leading to more effective treatments for depression and other mental health disorders, said the paper's corresponding author, Anne Andrews, a UCLA professor of psychiatry and biobehavioral sciences and of chemistry and biochemistry."

A 2025 paper highlighting the unreliability of serotonin measurements is entitled "The Continued Mismeasurement of Plasma Serotonin: A Systematic Review." It states this:

" The review covered the period from 2010 to July 2024 and is a follow-up of a similar review published in 2011 which found that nearly all published reports of PPP 5-HT [serotonin] were clearly and markedly erroneously high. This problem has persisted unabated with nearly all retrieved 47 reports from the past 14 years also apparently being erroneously high."

It seems rather clear that the 2015 paper mentioned above (entitled "Asphyxia-activated corticocardiac signaling accelerates onset of cardiac arrest") did not actually provide any robust evidence of a surge or even a substantial increase of cognition-relevant chemicals in the brains of dying rodents. The Figure 4 of the paper purporting to show an increase in certain neurotransmitters in dying rats is a figure reporting two statistical significances, both of only "p < .05," which is very unimpressive. It is widely regarded in experimental science that evidence listed as "p < .05" is mere borderline evidence, and when papers present such a "p < .05" other researchers may scorn it and use the derisive term "p-hacking" to describe it. Look at the error bars in the graph (indications of uncertainty in measurement) -- they are very large, and probably underestimate the uncertainty. Even if there had been some big increase in the chemicals listed in the Figure 4 of the paper, it would do nothing to explain near-death experiences, because none of the chemicals mentioned are hallucinogens. A serotonin surge might explain a little perk in your mood, but could never explain you reporting seeing yourself out of your body, or visiting some realm of the dead or having mystical experiences. Also, Figure 5 of the paper contradicts claims of brain waves persisting after heart rate stops. In Figure 5A we see the brain waves of the rats completely flatlining by the time the red EKG reading shows a cessation of heart rate.

The fact that the BBC Science Focus article has referred us to a 2015 paper rather than a more recent paper hints that the claimed result of an increase in brain chemicals of dying rats has not been replicated by any high-quality paper.

Postscript: None of the chemicals mentioned above (denosine, dopamine, norepinephrine, gamma-aminobutyric acid, glutamate, aspartate or serotonin) is a hallucinogenic substance, which makes irrelevant all claims of increases in such chemicals at the time of death or during cardiac arrest. Attempts have

- HSAM Memory Whiz Subjects Scored 25 Times Higher on a Random Dates Test
- How High-Speed Life Reviews in Near-Death Experiences Discredit "Brains Make Minds" Claims and "Brains Store Memories" Claims
- More Indications That Scientists Have No Understanding of How a Brain Could Think
- Searching Hard for Evidence of Strokes Causing Loss of Episodic or Conceptual Memories, They Come Up Short
- Cognitive Neuroscience Is Floundering, So the Kavli 2024 Neuroscience Prize Went to Low-Quality Research
- We Cannot Trust Neuroscientists to Speak Accurately About What Brains Do and What Minds Experience
- The Mythology of "Memory Maintenance Molecules"
- No, Noise Miners, Neurons Don't Encode Words
- The Lack of Bodily Addresses Crushes the Credibility of Mechanistic Biology and Mechanistic Psychology
- She Didn't Seem to Need the Right Half of Her Brain, and Losing It Did Not Seem to Dim Her Memories
- 60+ Aspects of the Human Mind, and Whether Brains Explain Them
- Papers Claiming Brain Memory Storage Keep Citing Poor Science Papers
- A Report of "Unimpaired Faculties Without a Brain" (John Bly)
- Exhibit A That There Is No Such Thing as a Chemical Root of Consciousness
- Look Very Closely at a Study Claiming Thought Reading of Brains, and You'll Find the Shady Tricks Behind It
- UK Biobank Study of Thousands of Brains Finds Negligible Correlation Between Brain Size and Intelligence
- Neuroscientists Senselessly Think They Can Perform Innumerable Contortions of Brain Data, and Then Claim a Discovery
- They Mapped 150 Million Synapses, and Found No Sign of Stored Memories
- Brains Show No Physical Signs of Reading or Retrieval When You Recall Something
- In 1941 the Editors of Scientific American Confessed That Telepathy Was Proven
- Old Newspaper Stories Relevant to Whether Brains Make Minds

been made to claim that some people having auditory hallucinations have untypical dopamine levels, but such claims are shaky, and do not involve any clear dose/response relationship. The paper "Effects of dopamine in man" describes an experiment in which authorities gave 13 subjects a 1% infusion of dopamine, which is enough to cause levels of dopamine to increase by very many times. The paper makes no mention of any hallucinations produced, nor does it mention any mental effects.

at June 09, 2025 No comments:

Labels: near death experiences

Saturday, May 24, 2025

New Paper Confirms That Brains Shut Down Electrically Within a Few Seconds After Hearts Stop

Very many of the most impressive-sounding cases of near-death experiences occur after someone has a cardiac arrest or heart attack that causes his heart to stop beating. A minute later or a few minutes later the person's heart beat may be restored after medical intervention such as CPR or the use of an IED device. There may be even a period of five or ten minutes during which the person's heart is stopped before the restoration of the heart beat. The person may then have an amazing and elaborate story to tell of what went on during this interval between his heart stopping and the restoration of his heart beating. He may recall floating out of his body and observing his body from two meters or from the top of the ceiling. He may recall traveling through some mysterious tunnel at high speeds, and briefly visiting some mystical realm where he encounters a deceased relative or some numinous mysterious Being of light.

When evaluating whether there is any possible neural explanation for the most dramatic cases of near-death experiences, a key issue is whether the brain shuts down electrically very quickly after the heart stops beating. Constant electrical activity is the hallmark of a normally functioning brain. If it were true that brains keep running fairly normally in the minutes after the heart stops beating, we might be able to explain some of these near-death experiences as being caused by something going on in the brain. The more quickly and the more fully that a brain shuts down electrically after the heart stops beating, the more difficult or impossible it is to explain near-death experiences as being caused by brain activity.

The term "isoelectric" or iso-electric in reference to brain waves means a flat-lining equivalent to no electrical activity in the brain, as measured by EEG readings. The paper here states, "Within 10 to 40 seconds after circulatory arrest the EEG becomes iso-electric." Figure 1 of the paper here says that such an isoelectric flat-lining occurred within 26 seconds after the start of ventricular fibrillation, the "V-fib" that is a common cause of sudden cardiac death, with "cortical activity absent." Also referring to a flat-lining of brain waves meaning a stopping of brain electrical activity, another scientific paper says, "several studies have shown that EEG becomes isoelectric within 15 s [seconds] after ischemia [heart stopping] without a significant decrease in ATP level (Naritomi et al., 1988; Alger et al., 1989)." Another paper tells us this about brain waves and infarction (obstruction of blood flow), using CBF to mean cerebral blood flow, and the phrase "the EEG becomes isoelectric" to mean a flat-lining of brain electrical signals:

- Newspaper Accounts of Memory Marvels (Part 1)
- Why Your Brain Is Not Like a Computer
- They Memorized Many Times Faster Than a Brain Could Ever Do
- Faltering Neuroscientists Improperly Offer Computer Science Papers as Examples of Neuroscience Progress
- The Brains of 60 Subjects Seemed to Look the Same During Eyes Closed Mental Rest, Recall and Math Activity
- The Problem of Explaining Human Minds Is a Million Times Larger Than a Mere "Problem of Conscious Experience"
- Large Neuron Groups Cannot Be Sequentially Traversed, So Brains Cannot Store Complex Learned Information
- Eyes and Minds Can Focus, But Brains Cannot Physically Focus
- Most Subjects in Neuroscience Research Do Not Understand the Risks They Are Taking
- Neuroscientists Cannot Credibly Explain Any of These 11 Features of Out-of-Body Experiences
- Microscopes Will Never Find the Slightest Trace of Learned Information in a Human Brain
- Newspaper Accounts of Memory Marvels (Part 2)
- The Reason You Will Never Be Able to Upload Your Mind Is the Same Reason You Won't Ever Need To
- Brain Tumors Seem to Have Relatively Little Effect on Cognitive Function
- Newspaper Accounts of Memory Marvels (Part 3)
- They Mentally Calculated Faster Than a Brain Could Ever Do
- Claimed Evidence for "Concept Cells" Is Just Noise-Mining Nonsense
- More Candid Confessions of the Cognition Experts
- Neuroscientists Offer Only the Most Hazy Hand-Waving When Trying to Explain Memory
- List of Breakthrough Prize Winners in Life Sciences Hints at the Lack of Progress in Cognitive Neuroscience
- HSAM Wonder Daniel McCartney Was a Math and Memory Marvel
- LTP Research Has Done Nothing to Show Any Neural Basis for Memory Creation
- The Lack of Strong Links Between Mental Illness and Brain States

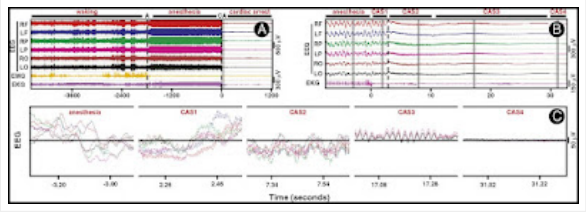
"*When normal CBF declines, the EEG first loses the higher frequencies (alpha and beta bands), while the lower frequencies (delta and theta bands) gradually increase. When the CBF decreases further towards an infarction threshold, the EEG becomes isoelectric.*"

Similarly, another paper refers to blood pressure, and tells us, "When flow is below 20 mL/100 g/min (60% below normal), EEG becomes isoelectric." meaning that brain electrical activity flat-lines. The 85-page "Cerebral Protection" document here states, "During cardiac arrest, the EEG becomes isoelectric within 20-30 sec and this persists for several minutes after resuscitation." Another scientific paper states this:

"Of importance, during cardiac arrest, chest compliance is not confounded by muscle activity. The EEG becomes isoelectric within 15 to 20 seconds, and the patient becomes flaccid (Clark, 1992; Bang, 2003)."

You can find quite a few additional papers asserting that brains flat-line very quickly after cardiac arrest by doing Google or Google Scholar searches for the phrase "EEG becomes isoelectric" or "EEG becomes iso-electric."

A 2013 paper co-authored by Jimo Borjigin had the misleading title "Surge of neurophysiological coherence and connectivity in the dying brain." The paper's graphs told us a different story than the idea suggested by that title. Figure 1 of the paper is shown below. We see EEG brain wave signals from rats who were injected with a chemical causing the heart to stop.



Nothing impressive is seen. It's just what you would expect: brain signals trailing off and dying out very quickly after the heart stops. This data offers no justification for a title of "Surge of neurophysiological coherence and connectivity in the dying brain." An honest title of the paper would have been: "Brain waves very quickly trail off and die out after hearts stop in rats."

A 2017 paper was "Electroencephalographic Recordings During Withdrawal of Life-Sustaining Therapy Until 30 Minutes After Declaration of Death." That 2017 paper studied the brain waves of four humans who died in Ontario, Canada after their hearts stopped. These were patients different from the four Michigan, USA patients whose deaths were documented in the 2023 Borjigin paper described below. Referring to the 2013 paper co-authored by Borjigin, the 2017 paper stated, "We also did not observe any well-defined EEG states following the early cardiac arrest period as previously reported in rats." Of course -- brain electrical activity stops when the heart stops, or only a few seconds later. The paper points out that "one must be careful about false positive EEG signals from muscular and/or cardiac sources." Motion and muscle activity shows up on EEG readouts, producing what are called motion artifacts. An involuntary muscle twitch (or a movement by a medical person of part of an unconscious body) a few seconds after death may show up as a blip

- Subject MM Had a Stupendous Memory for Facts, But a Normal Brain
- Lighting-Fast Readers Exceed the Speed Limits of a Brain
- They Too Mentally Calculated Faster Than a Brain Could Ever Do
- They Did Well After a Huge Loss of Brain Tissue
- Newspaper Accounts of Memory Marvels (Part 4)
- NIH's Million-Dollar "Epigenetic Memory" Bet Fails
- The Myths About Patient K. C. and Patient H. M.
- He Had Half a Brain But "Superior Intelligence"
- New Poll Suggests About 29% of Neuroscientists Doubt the Synaptic Memory Theory
- They Lost Huge Parts of Their Brains, But Their Knowledge and Recollection Were Preserved
- The Groundless Myth That "Floods" or "Surges" Help Explain Near-Death Experiences
- Physically Unrealistic NEPTUNE "Model" of Near-Death Experiences Is a Misleading Mishmash

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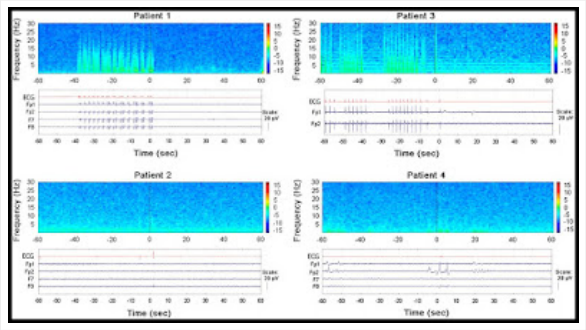
on an EEG reading. Such a thing is no actual evidence of brain activity during conscious experience. A scientific paper commentary says, "Contamination of EEG recordings by muscle artifact is a well-recognized problem, especially in the high-frequency gamma range, leading to erroneous estimates of EEG spectral power and coherence (Goncharova et al., 2003; Pope et al., 2009; Fitzgibbon et al., 2013)." It is just such a false-alarm-prone gamma range that Borjigin's papers on this topic have been centered around.

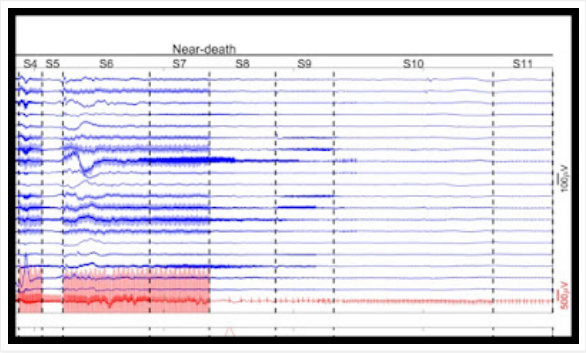
Below is Figure 3 from the paper. In Patients 1, 2 and 3 there is no significant brain wave activity (as shown in the blue EEG lines) after the time point marked 0 (time of last heart beat). In Patient 4 the EEG lines flatline at five seconds after the heart stopped, and there is about 15 seconds later merely a weak blip or two around the time 20 to 30 seconds after the heart stopped, but that dies away after a few seconds.



In none of the eight patients graphed in these two papers do we have any substantive evidence of brains working for more than an instant after the patient's last heart beat.

In a 2023 paper Borjigin again gave us a misleading title trying to suggest that brain waves had been significantly observed after the stopping of the heart. The paper was entitled "**Surge of neurophysiological coupling and connectivity of gamma oscillations in the dying human brain.**" An actual look at the data gathered did not support the insinuations of the title.

Below is part of Figure S1A from the supplemental information of the paper. We see the brain waves of the dying Patient One in blue (EEG readings), and we see in the last row a red ECG reading that is a measure of heart activity.



April 2025 (7)
March 2025 (8)
February 2025 (6)
January 2025 (5)
December 2024 (6)
November 2024 (4)
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August 2024 (4)
July 2024 (5)
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December 2021 (5)
November 2021 (3)
October 2021 (3)
September 2021 (2)
August 2021 (3)
July 2021 (3)
June 2021 (2)
May 2021 (3)
April 2021 (3)
March 2021 (4)

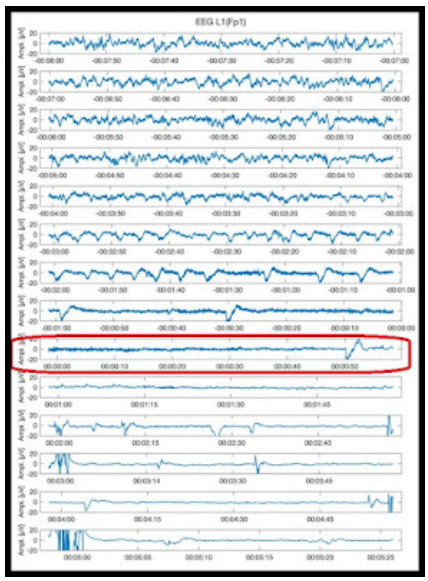
The text below this visual tells us this about these stages that are labeled S5, S6, S7, S8, S9 and S10, using the term "bradycardia" which means lower-than-normal heart rate:

"The pacemaker was automatically turned off (S5) and restarted from S6. S7 starts when rapid heartrate drop was seen which ended when pacemaker was turned off by clinical staff. S8 denotes the bradycardia period where RR interval (RRI) is longer than 5s. In S9, RRI is below 5s (partial heartrate recovery). S10 saw the reappearance of the P-waves and further recovery of heartrate. S11 ends at the last recorded heartbeat with periodical PAC-like ECG pattern."

The evidence in this case is crystal clear: there was virtually no brain activity at stage S10 (when there was "further recovery of heartrate") and no brain activity at all at stage S11, which ended with the "last recorded heartbeat." The data on this Patient One showed that her brain activity had shut down completely by the time of her last heartbeat. It was a similar story for the other three patients whose data is given in this paper. By studying the graphs in the supplemental information of the paper, you can see that none of the patients showed evidence of significant brain activity occurring more than 15 or 20 seconds after their hearts stopped beating.

There is a new paper giving some additional data on this topic. The January 2025 paper is entitled "Parametrization of the dying brain: A case report from ICU bed-side EEG monitoring." We have data on a man in a coma, whose life was being maintained by machines. The machines were turned off. To get graphs of the relevant data, we have to look at the paper's Supplementary Materials, which are provided as a Word document. Supplementary Figures 3-6 show us the relevant data.

Here is one fourth of the EEG data, matching the brain activity. Each line represents one minute of time. A number such as -02:00:00 refers to a time two minutes before the heart stopped; a number such as -00:30:00 refers to a time thirty seconds before the heart stopped; and a number such as 00:30:00 refers to a time thirty seconds after the heart stopped. I have red-circled the line showing the first minute after the heart stopped. We see a very clear flatlining during that minute.



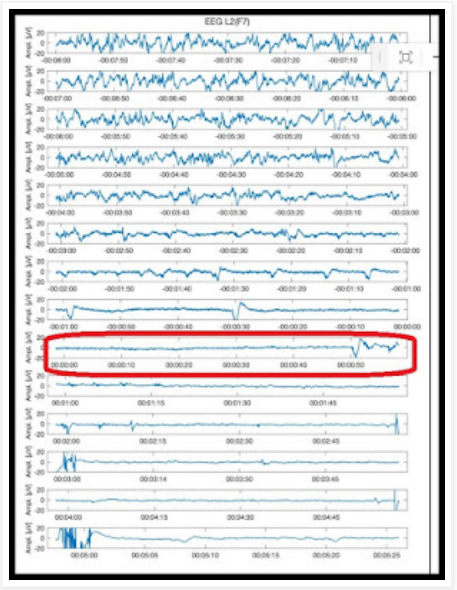
February 2021 (3)
January 2021 (3)
December 2020 (3)
November 2020 (3)
October 2020 (4)
September 2020 (3)
August 2020 (2)
July 2020 (2)
June 2020 (3)
May 2020 (2)
April 2020 (1)
March 2020 (1)
February 2020 (2)
January 2020 (1)
December 2019 (1)
November 2019 (1)
September 2019 (1)
August 2019 (1)
July 2019 (2)
June 2019 (1)
May 2019 (1)
April 2019 (1)
February 2019 (1)
January 2019 (1)
December 2018 (1)
November 2018 (3)
September 2018 (1)
August 2018 (1)
July 2018 (1)
June 2018 (1)
April 2018 (30)

Labels

- "brain as computer" metaphor
- above-average IQ with huge brain tissue loss
- academia dysfunction
- acquired savant syndrome
- adult neurogenesis
- agenesis of corpus callosum
- aging
- AI
- Alzheimer's disease
- amnesia
- analytic idealism
- bad computer programming in neuroscience studies
- bad predictions by scientists
- bad psychiatric surveys
- bad psychiatry
- bilingualism with half a brain

We see a flatlining of brain electrical activity, except for a few scattered spikes that only last a few seconds each. These may correspond to muscle movements or twitches that can occur in the first few minutes after death. These spikes may also have been caused by staff touching the patient, and the paper is probably referring to such spikes when it says, "After death, sporadic, polymorphic artifacts are observed (likely from staff touching the patient)."

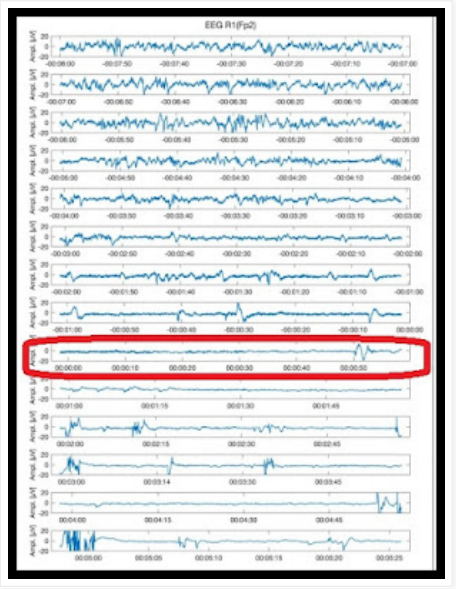
Here is the second fourth of the EEG data, matching the brain activity. Each line represents one minute of time. A number such as -02:00:00 refers to a time two minutes before the heart stopped; a number such as -00:30:00 refers to a time thirty seconds before the heart stopped; and a number such as 00:30:00 refers to a time thirty seconds after the heart stopped. I have red-circled the line showing the first minute after the heart stopped. We see a very clear flatlining during that minute.



We see a flatlining of brain electrical activity, except for a few scattered spikes that only last a few seconds each. These may correspond to muscle movements or twitches that can occur in the first few minutes after death. These spikes may also have been caused by staff touching the patient, and the paper is probably referring to such spikes when it says, "After death, sporadic, polymorphic artifacts are observed (likely from staff touching the patient)."

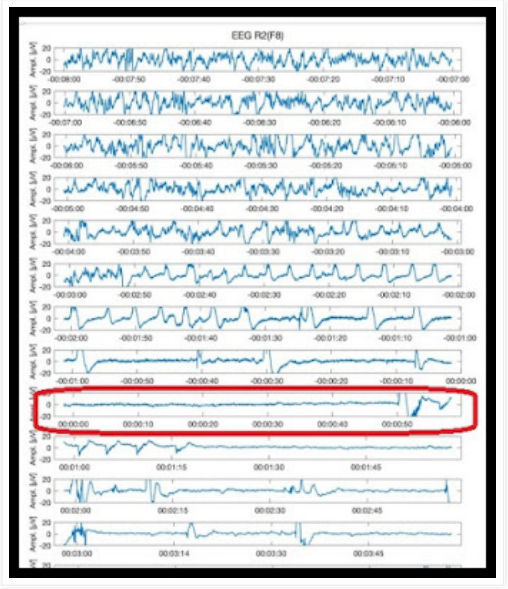
Here is the third fourth of the EEG data, matching the brain activity. Each line represents one minute of time. A number such as -02:00:00 refers to a time two minutes before the heart stopped; a number such -00:30:00 refers to a time thirty seconds before the heart stopped; and a number such as 00:30:00 refers to a time thirty seconds after the heart stopped. I have red-circled the line showing the first minute after the heart stopped. We see a very clear flatlining during that minute.

- binary memory storage theory
- biotech industry influence on neuroscience
- brain abscess
- brain changes with age
- brain collections
- brain connectivity
- brain cyst
- brain effect on personality
- brain imaging
- brain injury
- brain physical shortfalls
- brain research projects
- brain shortfalls
- brain signal speed
- brain size and intelligence
- brain surgery
- brain tumors
- brain uploading
- brain waves
- calendar calculator
- CAMKII
- CBC theory
- chemical imbalance theory of mental illness
- citation errors
- citation of low-quality research
- claim of Jennifer Aniston cell
- claims of brain localization
- claims of chromatin involvement in memory
- claims of concept cells
- claims of concept-selective regions in the brain
- claims of epigenetic encoding of memory
- claims of mind reading by brain scans
- claims of neural correlates of love
- claims of neural correlates of memory activity
- claims of neural correlates of mental activity
- claims of neural representations
- claims that brains think
- clairvoyance
- conscious cells theory
- consciousness
- consciousness shadow-speaking
- corporate funding of neuroscientists
- COVID-19
- cryo-EM
- Darwinism



We see a flatlining of brain electrical activity, except for a few scattered spikes that only last a few seconds each. These may correspond to muscle movements or twitches that can occur in the first few minutes after death. These spikes may also have been caused by staff touching the patient, and the paper is probably referring to such spikes when it says, "After death, sporadic, polymorphic artifacts are observed (likely from staff touching the patient)."

Here is the last fourth of the EEG data, matching the brain activity. Each line represents one minute of time. A number such as -02:00:00 refers to a time two minutes before the heart stopped; a number such as -00:30:00 refers to a time thirty seconds before the heart stopped; and a number such as 00:30:00 refers to a time thirty seconds after the heart stopped. I have red-circled the line showing the first minute after the heart stopped. We see a very clear flatlining during that minute.



We see a flatlining of brain electrical activity, except for a few scattered spikes that only last a few seconds each. These may correspond to muscle movements or twitches that can occur in the first few minutes after

- default mode network
- dementia
- dendritic spines
- depression
- distributed recall hypothesis
- DNA
- dreams
- EEG studies
- eidetic memory
- emergence
- emergentism
- engram
- epigenetics
- epilepsy
- ESP
- evolution
- exceptional auditory memory
- exceptional mathematics ability
- exceptional memory
- exceptional multitasking
- exceptional musical memory
- exceptional reading ability
- exceptional recall of facts
- exceptional recall of number sequences
- exceptional recall of text sequences
- exceptional recognition memory
- exceptional speed of memorization
- exceptional speed of thinking
- exceptional time-related ability
- excessive and potentially hazardous brain scanning in neuroscience research
- extent of paranormal experience
- famous neuroscience case histories
- fastest memorizers
- feedback loops
- file drawer effect
- first rule of neural explanation
- fMRI
- free books by Mark Mahin
- free will
- free-exploratory neuroscience technique
- freezing behavior
- frontal lobes
- fusiform face area
- Gadolinium contrast agents
- gaslighting
- genes
- global workspace theory

death. These spikes may also have been caused by staff touching the patient, and the paper is probably referring to such spikes when it says, "After death, sporadic, polymorphic artifacts are observed (likely from staff touching the patient)."

The evidence is clear: brains shut down electrically very soon after the heart stops beating, typically within 15 or 20 seconds, as indicated by these visuals and the quotes from medical or scientific authorities I gave above. So the vivid and elaborate narratives (near-death experiences) so often provided by those whose hearts had stopped cannot be explained as brain activity. The very arising of such narratives corresponding to times when brains had shut down is evidence against both the claim that the brain is the source of the mind and the claim that memory formation occurs by brain activity. Shut-down brains (electrically inactive) should never be giving rise to vivid and elaborate memories.

Scientists can be astonishingly stubborn when it comes to realizing the implications of out-of-body experiences and near-death experiences. I sometimes write science fiction stories on another blog of mine, and a few of those stories are about the kind of groupthink, dogmatism, and resistance to spooky observations that we see from materialists. Here are some examples:

- My recent story "The Sun Seers of Planet Evercloudy" is about a constantly cloudy planet in which scientists have created a taboo under which believing in the sun is all-but-forbidden.
- My story "Planet of the Blind" is about a planet of intelligent people where no one can see, except for a small, scorned group who make claims of having a mysterious ability they call "vision," claims that the planet's mainstream scientists reject.
- My story "The Mars Mission" includes an account of a materialist Mars explorer who resolutely refuses to believe the testimony of his senses when he dies and has an out-of-body experience.
- My story "The Ocean Deniers of Centralia" is about a mainstream academia community that refuses to believe the reports of a scorned minority that describes seeing a strange realm of existence unlike any that the mainstream authorities have seen with their eyes.

at May 24, 2025 No comments:

Labels: near death experiences, out-of-body experiences

Thursday, May 1, 2025

Three Faulty Studies on Near-Death Experiences

Several readers of this blog have left comments trying to get me to comment on a recent study claiming to offer a "neuroscientific model of near-death experiences." The paper is behind a paywall, and my policy is never to pay for neuroscience research behind a paywall. Given the very strong tendency of neuroscientists these days to produce poorly designed junk science studies using bad methods, this is good policy for anyone to follow. Making a serious misstatement, the abstract of the paper makes no mention of anything that should make us suspect the paper is worth paying $30 for, and it fails to mention any new experimental research.

I can, however, make some comments on previous papers co-authored by the main author of the study (Charlotte Martial), papers that are publicly available.

- gnostic cells
- groupthink
- health hazards in neuroscience experiments
- hemispherectomy
- high mental function despite large brain damage
- hippocampus
- how to detect bad neuroscience
- HSAM (Highly Superior Autobiographical Memory)
- Human Brain Project
- hydrocephalus
- hyperlexia
- hyperscanning
- hyperthymesia
- hypnosis
- idea creation
- idealism
- imagination
- inappropriate neuroscience prize awards
- informed consent
- instincts
- integrated information theory
- intelligence after brain injury
- intelligence of animals with small brains
- interbrain synchrony
- IQ increase after brain tissue removal
- IQ increase after hemispherectomy
- keep-torturing-the-data-until-it-confesses tactics
- lack of corpus callosum
- lack of neural correlates of thinking
- lack of progress in cognitive neuroscience
- life review
- longtermism
- loss of cerebellum
- loss of corpus callosum
- loss of frontal lobes
- loss of half of brain
- loss of left half of brain
- loss of most of brain
- loss of right half of brain
- loss of temporal lobe
- low connectivity of brains
- low statistical power in neuroscience experiments
- LTP
- M. Mahin autobiographical sketch
- materialism

Her 2020 paper "Near-Death Experience as a Probe to Explore (Disconnected) Consciousness" is one that very badly mischaracterizes near-death experiences. She has a 3D chart in which a near-death experience is depicted as a state of the *lowest* wakefulness and the *lowest* connectedness. But contrary to such a description, it has been massively reported by those having near-death experiences that they had a super-high state of wakefulness and a super-high state of connectedness, with the description "realer than real" sometimes used. The study here backs up such claims.

Martial clumsily tries to define wakefulness as being a state of eyes open, but that is not correct. You can be wide awake with your eyes closed. Often awaking in the middle of the night for an hour or more, I routinely do some of my best thinking while lying awake in bed with my eyes closed, in a state of high wakefulness. Martial also makes some arbitrary definition of "connectedness" that seems to correspond to having regular sensory experience. The definition makes no sense in the context of near-death experiences, where people report a very high sense of connectedness that is different from regular sensory experiences.

In her 2020 paper Martial makes the extremely inaccurate statement that "no empirical study has confirmed that NDEs include some real external events." To the contrary, very many accounts of near-death experiences have discussed people describing details of the real world (including real events) during out-of-body experiences, events and details they should not have been able to have known about during some state of what looked like unconsciousness or cardiac arrest occurring during their near-death experiences. Many such accounts are described in my post here. Many other such accounts can be read in my series of 31 posts you can read here, such as my post here. We may presume that whatever "model" of near-death experiences Martial has described in her new paper behind a paywall, it probably involves confusions and mischaracterizations and misstatements similar to those in her 2020 paper "Near-Death Experience as a Probe to Explore (Disconnected) Consciousness," giving an additional reason not to spend thirty dollars to pay for a look at her latest "model."

We have in her 2020 paper vacuous skimpy hand-waving that ignores one of the central reasons why neuroscientists cannot explain near-death experiences that are rich in very vivid memories: the fact that such experiences often occur when the brain has electrically shut down, during the state of asystole that occurs within 15 or 20 seconds after the heart stops. Martial states, "Although memory theories have difficulties explaining NDEs and their resulting rich memory, an answer can be provided by theories demonstrating the importance of the medial temporal lobe for memory encoding and retrieval." This is a strange statement indeed. *Theories* do not demonstrate things; facts and observations demonstrate things.

No neuroscientist has any detailed credible theory of how a brain could do any such thing as memory encoding or memory retrieval, and there is no understanding of how any of the endless types of things humans learn and experience could ever be translated into brain states or synapse states. And if the brain were to do any memory encoding, it would require the normal electrical operation of the brain, which is often shut down while people are having near-death experiences, while brain waves (as measured by EEG devices) flatline. So it is false to claim as Martial did that "an answer can be provided by theories demonstrating the importance of the medial temporal lobe

- mechanistic biology
- memory after brain injury
- memory encoding
- memory maintenance
- memory recall
- memory storage
- mental focus
- mental illness
- methylation theory of memory storage
- microscopic analysis of brain tissue
- microtubules
- mind over matter
- mind uploading
- misleading visuals in brain imaging papers
- misstatements about neuroscience case histories
- molecular machinery
- morphogenesis
- Morris water maze
- multiple copies of a memory theory
- narrowness of neuroscientist studies
- natural selection
- near death experiences
- network neuroscience theory
- neural noise
- neuron nicknames
- neuroscience blogs
- neuroscience research endangering patients with brain problems
- neuroscientist confessions
- neuroscientist hand-waving
- neuroscientist pareidolia
- noise-mining
- non-local consciousness
- nonneuralism
- novelty preference technique
- opinion poll of neuroscientists
- optogenetics
- orchestrated objective reduction theory
- origin of biological complexity
- origin of man
- origin of Mind
- origin of minds
- out-of-body experiences
- overblown hype
- pain insensitivity
- panpsychism
- paranormal phenomena
- patient H.M.

for memory encoding and retrieval." Neuroscientists are at an utter loss to credibly explain how any brain could form a memory during everyday living, and trying to explain how an electrically inactive brain could form a memory would be harder than explaining how a jet without any fuel could fly between cities. Microscopic examination of human brain tissue has never found any trace of stored memories and never found any trace of learned human knowledge.

The insinuation that the medial temporal lobe is necessary for memory is incompatible with the facts of epilepsy surgery outcomes. The temporal lobe is often removed to treat severe epilepsy, without any damage to memory or cognition, as I discuss in my post here. A paper states, "The data do not confirm concerns that patients undergoing temporal lobe epilepsy surgery are likely to develop accelerated memory decline over the longer term." See the appendix of this post for a discussion of how the data discredits the claim that the medial temporal lobe is vital for memory.

A 2018 paper co-authored by Martial had the misleading title "DMT Models the Near-Death Experience." The paper is critically discussed in my 2018 post here, where I find quite a few reasons for rejecting its validity. The study group sizes used were the usual way-too-small study group sizes used in neuroscience studies. There was one group of 3 subjects receiving 7 milligrams of DMT, another group of four subjects receiving 14 milligrams of DMT, and another group of five subjects receiving 20 milligrams. In a properly designed study of this type every study group would have consisted of at least 20 subjects.

The amount of DMT given in the study was utterly unrealistic for any discussion of a natural release of DMT. The question of DMT in the brain was clarified by David E. Nichols in a paper he authored in the Journal of Psychopharmacology. Speaking of DMT (also known as N,N-dimethyltryptamine) in the paper Nichols says, “It is clear that very minute concentrations of N,N-dimethyltryptamine have been detected in the brain, but they are not sufficient to produce psychoactive effects.” Addressing speculations that DMT is produced by the tiny pea-sized pineal gland in the brain, Nichols points out that the main purpose of the pineal gland is to produce melatonin, but the pineal gland only produces 30 micrograms of melatonin per day. But the pineal gland would need to produce about 20 milligrams of DMT (about 660 times more than 30 micrograms) to produce a mystical or hallucinatory experience. “The rational scientist will recognize that it is simply impossible for the pineal gland to accomplish such a heroic biochemical feat,” says Nichols. In the article in which he states that, it is noted that “DMT is rapidly broken down by monoamine oxidase (MAO) and there is no evidence that the drug can naturally accumulate within the brain.” Strassman attempted to detect DMT in the brains of 10 human corpses, but was not able to find any.

Given these facts, it is quite absurd to suggest that near-death experiences are being produced by DMT in the brain. We have about 100,000 times too little DMT in our bodies for DMT-produced experiences to appear. Web pages speculating that near-death experiences may be produced by DMT will typically tell us that DMT has been detected in rat brains, failing to tell us how much DMT was

- patient K.C.
- pharmaceutical industry influence on neuroscience
- philosophy
- philosophy of biology
- philosophy of mind
- Phineas Gage
- photographic memory
- physical shortfalls of all brains
- physicalism
- PKMZ
- PKMzeta
- place cells
- post-hypnotic amnesia
- pre-1975 near-death experience
- pre-1975 out-of-body experience
- precognition
- predicting intelligence from brains
- predicting psychology from brains
- predictions
- prefrontal cortex
- preservation of learned knowledge after hemispherectomy
- preservation of learned knowledge after loss of much of brain
- preservation of learned knowledge in animals after brain tissue loss
- protein turnover
- psychiatric mudslinging
- psychiatry
- psychical research
- quantum mechanics
- questionable research practices
- recall of 50-year-old memories
- recall of long texts
- recommended books
- redundant memory storage
- relative ease of getting a neuroscience PhD
- reliable techniques for measuring recall in rodents
- remote viewing
- replication crisis
- research abuse of epileptics
- savants
- science academia resemblance to organized religion
- science journalism
- scientific consensus
- scientific fraud
- scientist misconduct
- sequential traversal of neurons

detected (merely trace levels 100,000 times too small to produce any remarkable mental experiences).

What Martial and her co-authors did in this paper is to give subjects an amount of DMT more than 1000 times greater than the human body could ever naturally produce. This makes no sense from a standpoint of trying to naturally explain near-death experiences. The paper's claim that the DMT "modeled" near-death experiences is not correct. In my post here I point out nine ways in which near-death experiences differ from the experiences reported by the people getting DMT.

In order for us to judge how closely these DMT-induced experiences resembled near-death experiences, we would need to have first-hand accounts of the experiences from the people who had the experiences. It would have been very easy for a scientific study to have produced such accounts. Martial and her colleagues could have simply had each of his subjects write (or recite into a tape recorder) a 500-word or 1000-word account describing their experiences. Then those accounts could have been included verbatim as appendixes in the scientific paper. If that had been done, then we would be able to judge how closely the experiences resembled near-death experiences, not only by looking for points of similarity between DMT experiences and near-death experiences, but also by looking at things that happened during the DMT experiences that did not happen in the near-death experiences. But since Martial and her colleagues have not included any such accounts in their DMT paper, we have no way of accurately judging how closely the DMT experiences resemble near-death experiences. It could be that the DMT experiences were filled with all kinds of things that never happen in near-death experiences.

In fact, when we read previously published accounts of DMT experiences, such as those given here, we have reason to believe that DMT produces all kinds of weird stuff that doesn't show up in near-death experiences. The page includes all kind of random hallucinatory stuff such as someone seeing his house unbuilding itself, someone reporting that there were slinky toys everywhere, someone reporting his computer looking sad, someone reporting his friends melting, and someone being swallowed by a being like an octopus.

We can imagine what probably went on with this experiment:

(1) Subjects were probably told that they would be involved in an experiment in which scientists would test the hypothesis that DMT trips produce experiences like near-death experiences. This would have created a sense in the subjects that scientists were hoping that the subjects would report something like a near-death experience, so that the paper could publish a positive effect and get published.
(2) After being given DMT, subjects were then asked a series of questions about their experience, with each question being an item on the Greyson Scale (listing features of near-death experiences).
(3) Wishing to please the scientists that they were involved with, the subjects probably gave much higher percentages of "yes" answers than they would have given under a different questioning arrangement.

- sharp wave ripples
- short lifetime of synapses
- short lifetimes of brain protein molecules
- short lifetimes of dendritic spines
- simulation hypothesis
- so-called psychiatric brain surgery
- sociology of science
- source of thoughts
- speed of human minds
- speed reading
- Spiritualism
- split-brain operation
- stem cells
- strokes
- synapse theory of memory
- synapses
- synaptic mapping
- synaptic plasticity
- synaptic turnover
- T-maze
- teleospiritism
- telomeres
- terminal lucidity
- top-down theory of mind
- transhumanism
- transposition of senses
- traumatic brain injury
- unnecessary brain scans
- unreliability of synaptic transmission
- unreliable neuroscience techniques
- vaccines
- videos
- visual recognition
- Y-mazes

When a study like this is done, it is vital that the researchers tell us exactly what the subjects were told about the experiment prior to the experiment being conducted. We are told that the subjects were recruited. Were the subjects told that the experiment would be an attempt to see whether DMT use would produce reports like those given in near-death experiences? Such information might have produced a magnet effect, in which the people agreeing to participate would be more likely to be those hoping to help discredit near-death experiences, by reporting something like near-death experience effects after taking DMT. Such information might have also produced an expectation effect in which the subjects thought the experimenters were hoping to get reports like those of near-death experiences. But the paper co-authored by Charlotte Martial does not tell us this vitally important information about what the subjects were told about the experiment before it was conducted.

Lacking such information, we may presume that the subjects either were told that the experiment was one that would attempt to find whether those taking DMT would make reports like near-death experience reports, or that the subjects knew that such a thing was the goal of the experiment, even if they were not told that by the experimenters. In academia research subjects are typically students in a particular department, and word gets around in a department about what type of experiments are being done, and what the experiments are hoping to find. If the researchers had taken measures to make sure that the subjects were "blind" about the purpose of the experiment, that would have been a strong point in favor of linking DMT experiences and near-death experiences. But since no such measures are reported in the paper, we can presume that they were not taken.

Another study on near-death experiences co-authored by Martial takes a very different approach. The paper is entitled "
EEG signature of near-death-like experiences during syncope-induced periods of unresponsiveness." 22 subjects were trained in some technique by which you can cause yourself to faint. The subjects were connected to EEG machines that read brain waves, and were then encouraged to cause themselves to faint, using the techniques they had been trained in.

The paper fails to provide any good evidence that any of these subjects had a near-death experience. We have no quotations from any of the subjects, nor any narrative describing what any subject experienced. The reported average length of time the subjects fainted was only 16 seconds, that being an interval of time so short it should cause us to doubt that anyone of the subjects had something like a near-death experience.

The subjects were asked questions corresponding to the items on the Greyson Scale, questions such as "Did scenes from your past come to you?" and "Did you see or feel surrounded by a brilliant light?" The responses do not indicate any strong effect of matching the characteristics of near-death experiences.

The Greyson Scale questions are questions with three possible answers. Below is the beginning of a Table 1 in Greyson's original paper listing questions corresponding to the scale. For example, in response to question 8 ("Did you see or feel surrounded by a brilliant light"?) the choices are 2("Light clearly of mystical or other worldly origin"), 1 ("Unusually bright light") or 0 ("Neither.")

TABLE 2
Composition of Final NDE Scale

Component and Question	Weighted Response
Cognitive	
1. Did time seem to speed up?	2 = Everything seemed to be happening all at once 1 = Time seemed to go faster than usual 0 = Neither
2. Were your thoughts speeded up?	2 = Incredibly fast 1 = Faster than usual 0 = Neither
3. Did scenes from your past come back to you?	2 = Past flashed before me, out of my control 1 = Remembered many past events 0 = Neither
4. Did you suddenly seem to understand everything?	2 = About the universe 1 = About myself or others 0 = Neither
Affective	
5. Did you have a feeling of peace or pleasantness?	2 = Incredible peace or pleasantness 1 = Relief or calmness 0 = Neither
6. Did you have a feeling of joy?	2 = Incredible joy 1 = Happiness 0 = Neither
7. Did you feel a sense of harmony or unity with the universe?	2 = United, one with the world 1 = No longer in conflict with nature 0 = Neither
8. Did you see or feel surrounded by a brilliant light?	2 = Light clearly of mystical or other-worldly origin 1 = Unusually bright light 0 = Neither
Paranormal	
9. Were your senses more vivid than usual?	2 = Incredibly more so 1 = More so than usual 0 = Neither
10. Did you seem to be aware of things going on elsewhere, as if by ESP?	2 = Yes, and facts later corroborated 1 = Yes, but facts not yet corroborated 0 = Neither

It is vital that any researcher asking subjects questions from the Greyson Scale (like the questions above) give us exact data on how high the numbers were in the answers given. But Martial failed to do that. Her paper merely reports what fraction of the respondents answered either 1 or 2 to each of the questions corresponding to the Greyson Scale. Failing to report the data that you collected (when it is extremely easy to do so) is a very bad defect in a research paper.

The data that we get in the paper is below:

"*Did time seem to speed up or slow down*?" -- 22 out of 24 answered either 1 or 2. But the question asked does not exactly correspond to anything on the Greyson Scale, where the corresponding question is "Did time seem to speed up?"
"Were your thoughts speeded up?" -- 10 out of 22 answered either 1 or 2.
"Did scenes from your past come back to you?" -- 4 out of 22 answered either 1 or 2.

"*Did you suddenly seem to understand everything?* -- 0 out of 22 answered either 1 or 2.
Did you have a feeling of peace or pleasantness? -- 15 out of 22 answered either 1 or 2.
Did you have a feeling of joy? -- 6 out of 22 answered either 1 or 2.
Did you feel a sense of harmony or unity with the universe? -- 8 out of 22 answered either 1 or 2.
Did you see, or feel surrounded by, a brilliant light? -- 2 out of 22 answered either 1 or 2.
Were your senses more vivid than usual? -- 11 out of 22 answered either 1 or 2.
Did you seem to be aware of things going on elsewhere, as if by extra sensory perception? -- 0 out of 22 answered either 1 or 2.
Did scenes from the future come to you ? -- 0 out of 22 answered either 1 or 2.
Did you feel separated from your body? -- 16 out of 22 answered either 1 or 2.
Did you seem to enter some other, unearthly world? -- 4 out of 22 answered either 1 or 2.
Did you seem to encounter a mystical being or presence, or hear an unidentifiable voice? -- 2 out of 22 answered either 1 or 2.
Did you see deceased or religious spirits? --0 out of 22 answered either 1 or 2.
Did you come to a border or point of no return? -- 0 out of 22 answered either 1 or 2.

But did these "either 1 or 2" answers tend more to be the relatively weak "1" answer or the much stronger "2" answer? We will never know, because Martial has failed to tell us. We may presume with high confidence that the answers tended much more to be the weaker 1 answers than the stronger 2 answers, because if Martial had got lots of the stronger 2 answers, she almost certainly would have published those answers (that being much stronger evidence of the effect she was trying to show).

There is no excuse for the defect of this paper's failure to provide the exact numbers for the data and the paper's use of ambiguity shrouding what the exact answers were. No robust evidence has provided here of the creation of near-death experiences by voluntary procedures designed to produce fainting. The paper has failed to document any of its subjects having a near-death experience.

All that the paper documents is a minor tendency of respondents to give answers above 0 when asked some of the Greyson Scale questions that can be answered as 0, 1 or 2. That minor tendency can credibly be explained as an effect in which subjects tended to give answers that might be pleasing to scientists who they knew were hoping to get people describe something a little bit like a near-death experience.

When a study like this is done, it is vital that the researchers tell us exactly what the subjects were told about the experiment prior to the experiment being conducted. We are told that the subjects were volunteers. Were the subjects told that the experiment would be an attempt to see whether people fainting would produce reports like those given in near-death experiences? Such information might have

produced a magnet effect, in which the people agreeing to participate would be more likely to be those hoping to help discredit near-death experiences, by reporting something like near-death experience effects after fainting. Such information might have also produced an expectation effect in which the subjects thought the experimenters were hoping to get reports like those of near-death experiences. But the paper co-authored by Charlotte Martial does not tell us this vitally important information about what the subjects were told about the experiment before it was conducted. Its supplemental information document has only a generic template for an informed consent document, rather than the actual informed consent document the subjects signed.

In both of the papers discussed above, it is claimed that 7 on the Greyson Scale is a threshold for a near-death experience. The paper "DMT Models the Near-Death Experience" claims, " A total score higher or equal to 7 is considered the threshold for a NDE (Greyson, 1983)." The paper "EEG signature of near-death-like experiences during syncope-induced periods of unresponsiveness" makes a similar claim, repeatedly claiming that any score of 7 or higher on Greyson Scale qualifies an experience as "NDE-like." But in his paper introducing the Greyson Scale, Bruce Greyson never said that a score of 7 or higher qualified an experience as a near-death experience.

Instead, Greyson stated that the average Greyson Score for near-death experiences he studied was 15 out of a maximum of 32. He stated the following:

"The criterion sample of NDE reporters had a mean score of 15.01 on the NDE Scale [Greyson Scale] out of a total possible 32 points; i.e., they acknowledged the definitive presence of about half the scale items. The cut-off point on the NDE Scale for the determination of a NDE may vary with the purpose of making such a determination. A cut-off point 1 SD below the mean should include 84 per cent of all positive cases, assuming a normal distribution of scores of those with NDEs. This criterion would require a score of 7 or higher to establish the presence of a NDE; in the criterion sample, 62 subjects (83.8 per cent) had NDE Scale scores of 7 or higher."

This is not equivalent to saying that anything with a Greyson Scale of 7 or higher qualifies as a near-death experience.

Looking at the questions in Greyson's original paper introducing the Greyson Scale, it is easy to see how someone can give answers getting a score of 7, when describing experiences that are not at all like near-death experiences that include out-of-body experiences. Here are some examples:

Example 1: Someone fires a bullet at you, and misses. You give an answer of 2 to Question 1 (asked about whether time seemed to speed up), because the experience was real quick, so you thought "Everything seemed to be happening all at once." You give an answer of 1 to Question 2, because this experience caused you to think faster than normal, with thoughts rapidly occurring. You give an answer of 2 to

Question 5, because you experienced "incredible peace" after realizing the bullet missed you. You give an answer of 2 to Question 6, because you experienced "incredible joy" after realizing the bullet missed you. So you have now already reached 7 on the Greyson Scale, even though the experience had no resemblance to near-death experiences as they are commonly reported.

Example 2: You take some drug that seems to give you a "rush" like the exhilaration reported when people inject heroin. You give an answer of 2 to Question 1, answering "Everything seemed to be happening all at once," because that's an ambiguous phrase that someone might easily choose to describe a heroin rush. You give an answer of 1 to Question 2, because this experience caused you to think faster than normal, with thoughts rapidly occurring. You give an answer of 2 to Question 5, because you experienced "incredible peace" after getting the super-pleasant feeling of the heroin. You give an answer of 2 to Question 6, because you experienced "incredible joy" after realizing that you were going to be feeling super-good for quite a while. So you have now already reached 7 on the Greyson Scale, even though the experience had no resemblance to near-death experiences as they are commonly reported.

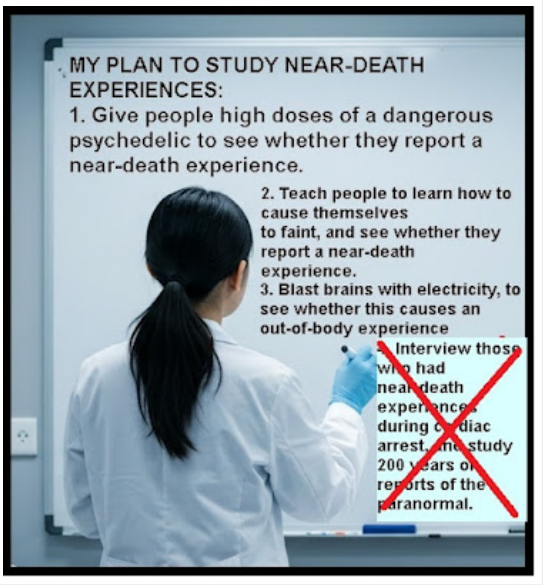
These examples help show that it is incorrect for scientific studies to be reporting Greyson Scale scores of 7 as evidence for near-death experiences. Going forward, we should follow these rules of evaluation when evaluating studies trying to experimentally reproduce near-death experiences:

(1) No such study should be taken seriously unless the authors report fully on exactly what the subjects were told about the experiment before it occurred.
(2) The validity of any such study should be doubted if the subjects were told (or allowed to learn) that the study was some study attempting to experimentally produce near-death experiences, particularly if the subjects were largely neuroscience department students. Under such a case there is too high a chance that the study will attract materialist volunteers eager to discredit near-death experiences (a thorn in the side of materialists) by reporting experiences sounding like near-death experiences, and too high a chance that subjects will report something like near-death experiences, to try to please researchers eager to get such reports.
(3) No such study should be taken seriously unless it includes transcripts of interviews with the subjects, in which they described what they experienced after the experimental intervention designed to mimic a near-death experience. Such transcripts are vital to help determine whether a subject actually had an experience matching the answers he may have given when asked questions corresponding to the Greyson Scale.
(4) Subjects should not be regarded as having had a near-death experience unless they either supply a narrative matching the typical narratives of near-death experiences, or give answers resulting in a score of at least 15 on the Greyson Scale, the average score of those

reporting near-death experiences. There are too many ways for experiences unlike near-death experiences to result in Greyson Scale scores of merely 7.

There is no substance in any neuroscientist attempt to explain out-of-body experiences or near-death experiences. The attempts that have been made by neuroscientists to explain such phenomena have been largely characterized by dishonesty, misstatements, vacuous hand-waving and irrelevance. For a critical discussion of some of the attempts that have been made, see my post "There Is No Evidence of a Neural Explanation for Out-of-Body Experiences" which you can read here, and my post "Misleading Claims in Attempts to Naturally Explain Near-Death Experiences and Out-of-Body Experiences," which you can read here, and also my post "The Guardian's Misleading Story on Near-Death Experiences" which you can read here. For a discussion of 11 features of out-of-body experiences, none of which neuroscientists can explain, read my post here.

Near-death experiences and out-of-body experiences provide some of the strongest evidence against claims that brains make minds and claims that brains store memories. When such experiences occur during cardiac arrest when the brain shuts down electrically and flatlines, as they often do, such experiences (resulting in the most vivid and unforgettable of memories) demonstrate that memories can be created independently of brain action.


MY PLAN TO STUDY NEAR-DEATH EXPERIENCES:
1. Give people high doses of a dangerous psychedelic to see whether they report a near-death experience.
2. Teach people to learn how to cause themselves to faint, and see whether they report a near-death experience.
3. Blast brains with electricity, to see whether this causes an out-of-body experience
4. Interview those who had near-death experiences during cardiac arrest, and study 200 years of reports of the paranormal.

Schematic depiction of an erring researcher of tomorrow

A better paper by Martial on this topic is the paper "
The Near-Death Experience Content (NDE-C) scale: Development and psychometric validation" where we get some good data from a survey of 403 people who claimed to have had a near-death experience. She has a scale mentioning features of near-death experiences, in which people can give a number between 0 and 4, with 0 meaning "not at all, none," 1 meaning "slightly," 2 meaning "moderately," 3 meaning "strongly" and 4 meaning "extremely, more than any other time in my life, and stronger than 3." The percentages giving the highest answer (4) are striking:

- 62% give the "extremely" answer (4) for "you had the impression of being outside of, or separated from your own body."

- 58% give the "extremely" answer (4) for "you had the sensation of leaving the earthly world or of entering a new dimension and/or environment."
- 56% give the "extremely" answer (4) for "you saw or felt surrounded by a bright light without any determined material origin."
- 35% give the "extremely" answer (4) for "your thoughts speeded up."

Three of these four percentages are higher than those reported by Greyson in a survey of 72 people.

Appendix: Removal of one of the brain's temporal lobes to treat epilepsy was done thousands of times a year in the decades before the year 2003, and also in the past two decades. Reports of severe memory problems following removal of the temporal lobe are actually rare. A 2003 scientific paper tells us how rare how such cases are:

"Davies and Weeks (1993) did report one case of postoperative amnesia in a series of 58 cases of unilateral temporal lobectomy, whereas Walczak et al. (1990) found one case of marked deterioration in memory from a preoperative normal state in their series of 100 patients who underwent such surgery. Rausch and Langfitt (1992) estimated that, on the basis of their series, 'the prevalence of patients at risk for postoperative amnesia who otherwise met criteria for surgery fell between one and four out of 218' (p. 508), and Jones-Gotman et al. (1993) noted that 'the base-rate of post-resection amnesia, were all patients operated on without prior screening with the amobarbital procedure, may be less than 1%, (p. 447).' "

The authors of the 2003 paper state, "We were able to locate nine definite cases of amnesia following unilateral temporal lobe surgery in the English-language literature." This is not very worrying, given that (1) many thousands of operations of this type were done before the year 2003; (2) doctors or scientists often loosely use the term "amnesia" for any of a large variety of memory performance problems, and typically use such a term for cases that are something other than a severe loss of learned or episodic memories; (3) there are many reasons why a person may have memory problems, and a few people having memory problem after a particular operation does not show the operation caused such a memory problem.

In fact, in Table 3 of the paper we are given the details of the impairments of these nine cases of claimed amnesia; and none of them sound like a case of loss of knowledge or episodic memories (with the possible exception of case 5, which is not well-described). We hear about what seem like rather minor memory performance shortfalls. A 2009 study carefully testing "before and after" memory results for 82 patients who had surgery for temporal lobe epilepsy tells us this: "The main finding of this study is that, at variance from the picture emerging from short-term follow-up studies, longer-term memory outcome after TLE [temporal lobe epilepsy] surgery seems to be good, as after 2 years memory performance was equal to or better than baseline [before surgery] in most patients." A review of 911 surgical operations for epilepsy (looking for bad effects) mentions no case of amnesia or memory loss or memory deterioration.

There is no robust evidence that surgical treatment for temporal lobe epilepsy causes loss of memories.

Postscript: A noteworthy new study "Out-of-body experiences: interpretations through the eyes of those who live them" gives us two cases similar to what I discussed above when I said that "very many accounts of near-death experiences have discussed people describing details of the real world (including real events) during out-of-body experiences, events and details they should not have been able to have known about during some state of what looked like unconsciousness or cardiac arrest occurring during their near-death experiences." We read this:

"Participant 5 described an out-of-body experience where she visited the hospital to see her aunt in the Intensive Care Unit (ICU). The following day, upon visiting the hospital in reality, she was deeply surprised to find that the hallway, the door, and the ICU where her aunt was located were exactly as she had seen during the OBE. Participant 10 reported that during her OBE, she visited a village in Scotland. As she flew in, she observed a bridge and a specific landscape, and upon 'landing' in the village, she noticed the village's name. Later, she confirmed on a map that both the river and the village existed."

The authors incorrectly state this:

"Given the complexity and subjective nature of OBEs, analyzing and explaining them within the scientific paradigm is an extremely complex task. It is not surprising, therefore, that the first publications on this phenomenon appeared in parapsychology journals (Alvarado, 1982; De Foe et al., 2013; Irwin, 2000)."

To the contrary, out-of-body experiences were thoroughly documented in many publications much earlier than 1982, such as these books of Robert Crookall published around 1964 to 1970:

- Out-of-the-Body Experiences by Robert Crookall;
- *More Astral Projections* by the same author, containing some fascinating cases I discuss here;
- What Happens When You Die by the same author.

And out-of-body experiences were well-described in the 1968 book *Out-of-the-Body Experiences* by Celia Green, and also well-described in the 1975 best-selling book Life After Life written by Raymond Moody. Newspaper accounts of out-of-body experiences appeared in the early 20th century, as I document in my post here.

Post-postscript: See my post here for a very long discussion of Charlotte Martial's paper "A Neuroscientific Model of Near-Death Experiences." The post is entitled "Physically Unrealistic NEPTUNE 'Model' of Near-Death Experiences Is a Misleading Mishmash." Martial has centered her paper around the speculation that surges in dopamine levels occurring during cardiac arrest might produce hallucinations causing near-death experiences. I point out why this speculation is untenable, given that brains very quickly electrically shut down during cardiac arrest, reaching a flat-line state of asystole within 10 or 20 seconds after the heart stops. I also point out that there have been two experiments in which human subjects were infused with dopamine, causing their dopamine levels to rise by very many times, up to 1000 times (a percentage increase of 10000%). Neither of the papers describing such experiments reported that any hallucinations were produced. The papers are those here and here. In my discussion I point out why a paper by Martial

claiming to have found "higher fantasy proneness" in those having near-death experiences did not show any such thing.

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Thursday, January 9, 2025

Neuroscientists Cannot Credibly Explain Any of These 11 Features of Out-of-Body Experiences

The most popular strategy used by those trying to explain accounts of the paranormal is the strategy of shrunken description. Given accounts that are utterly beyond the power of some skeptic to explain, the skeptic will try the technique of describing the type of observation so that only some strange little fraction of the whole phenomenon is reported.

An example of following such a strategy was Michael Faraday's feeble attempt to explain the mysterious events involving tables that were massively reported by a host of observers in the middle of the nineteenth century. Each of these phenomena was massively reported by very many witnesses at very many different times and very many different places (as described in my posts here, here, here, here, here, here, here, here, here, here & here):

(1) Mysterious raps coming from untouched tables, and from many other places in a room.

(2) Strange sudden movements of a table when a group of people merely put their finger tips on the table's top.

(3) Tables moving around a room "by themselves," both when people touched the tables with their finger tips, and when no one touched the table.

(4) Tables rising up on two legs, when no one was touching the table.

(5) Tables levitating up into the air, when no one was touching the table.

Faraday used the method of shrunken description to try to discredit such reports. He described the phenomenon as only involving item 2 above (table movements while hands were on a table), and attempted to account for it by involuntary muscle movement. He simply ignored all of the other phenomenon. Faraday's explanation is a joke to any serious scholar of these observation reports, because his explanation fails completely to account for items (1), (3), (4) and (5) above.

A similar strategy is typically used by a person trying to give explanations for out-of-body experiences while sticking to the dogma that the brain is the source of the mind. The person will describe an out-of-body experience in some shrunken way, without mentioning most aspects of the experience. He will then make some attempt at a neural explanation. For example, he may describe an

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- A New Paper Suggests Scientists Have No Solid Theory of Neural Memory Storage
- Why We Should Not Think the Human Brain Can Store Very Old Memories
- Why the Instantaneous Recall of Old Memories Should Be Impossible for a Brain
- Cases of High Mental Function Despite Large Brain Damage
- Reasons for Doubting a Brain Could Do the Super-Complex Encoding Needed to Neurally Store Episodic Memories or Concepts
- The Promissory Notes of Materialist Professors Are Long Past Due
- Study Finds No Correlation Between Number of Neurons and IQ
- The Many Cases Showing a Person's Mind Can Operate When His Brain Has Shut Down

out-of-body experience as a mere "feeling of floating," and may then try to explain why your brain might give you a "feeling of floating."

To rebut such sins of shrunken description, let me discuss all of the features that are often reported when out-of-body experiences are described. Not every account of an out-of-body experience will involve all of these features. But each of these features is something that is often reported when people report out-of-body experiences. Since I am trying to document many examples of particular features of out-of-body experiences, I may duplicate a quotation a few times, in cases when a quotation involves more than one of these features.

Each of the features is beyond any credible neural explanation. About most of these features we can say: no one would report such a thing if the mind is a product of the brain. The examples I will give of such features are only a tiny fraction of the reports of out-of-body experiences that have reported such features, and I could easily give ten examples for every example I will give.

Feature #1: observing one's own body from outside it, typically from a horizontal position, at a distance of about two meters above it, or from a location near the ceiling.

Below are some relevant examples:

(1) On page 288 of the July, 1894 edition of the Journal of the Society for Psychical Research, which can be read here, a witness reported being an observer above his own body, with an "elastic force" preventing him from floating too far away from his body. He reported he could not rise higher than "two yards" above his body.

(2) On page 34 of the January 17, 1903 edition of the periodical *Light*, which can be read here, George Wyld MD describes having an out-of-body experience in which his "soul-form" was "six or seven feet" above his body.

(3) On page 46 of the February 8, 1919 edition of the periodical *Light,* which can be read here, we hear an account by Captain Gilbert Nobbs of getting a severe head injury during World War I. He says, "I seemed for a moment somewhere in the emptiness looking down at my body lying in the shell-hole."

(4) On pages 57-58 of an Italian book (the text of which can be easily translated using Google Translate), we read that Mrs. Nathalie Annenkof reported an out-of-body experience, saying "***suddenly I found myself above and next to my body,*** *which I saw sitting on the edge of the grave... And I had the sensation of hovering above my body in complete bliss."*

(5) On page 23 of the periodical here we read this:

" 'On one occasion at a dentist's office.' says Arthur J. Wills, Ph.D., C.E., of 224 Herrick Road, Riverside, Illinois, 'the dentist was drilling in my tooth. Suddenly I found myself outside of myself looking over the dentist's shoulder into my own mouth!' "

(6) On the same page of that periodical, we read an account by a Mr. Hyman who says, "I found myself high up in the room, from where, to my terror, I saw my body on the bed, eyes closed. "

(7) Barbara Lambert said that during a difficult labor she floated out of her body to the ceiling, and saw her body from above, temporarily thinking that

- A Soul Might Explain Instincts, but DNA and Brains Cannot
- Five Hallmarks of an Information Storage System (None of Which Your Synapses Have)
- Your Physical Structure Did Not Arise Bottom-Up, So Why Think Your Mind Did?
- Why a "Mechanical Memory" Theory Does Not Work
- The Brain Seems to Have No Mechanism for Reading or Writing Memories
- No One Understands How a Brain Could Generate Ideas
- Prevailing Brain Dogmas Cannot Explain Hypnotic Phenomena
- 30 Reasons for Rejecting the Theory of Neural Memory Storage
- Common Experiences That Show the Untruth of Professorial Memory Claims
- Neuroscience Research Customs Guarantee an Abundance of Junk Science
- Groupthink and Peer Pressure Make It Taboo for Neuroscientists to Put Two and Two Together
- The Social Construction of Eager Community Mirages
- Preprint Server Counts Suggest Engrams Are Not Really Science
- Engrams Are Touted Like Phlogiston Was Once Touted
- Synaptic Delays Mean Brain Signals Must Move at a Snail's Pace
- Raven Smarts Defy Prevailing Brain Dogmas
- No One Can Credibly Explain Why a Brain Would Store a Memory in One Specific Spot
- Brain Dogmas Versus Case Histories That Refute Them
- Inaccurate Titles and Misleading Citations Are Common in Science Papers
- In Neuroscience Papers Bluffing Is More Common Than Candor
- Young Age of Languages Contradicts Claims of Neural Storage of Linguistic Information
- Vacillating Disarray of the Memory Trace Theorists
- Study Finds "Poor Overall Reliability" of Brain Scanning Studies
- "Brains Store Memories" Dogma Versus the Reality of Noisy Brains
- The Brain Has Nothing Like 7 Things a Computer Uses to Store and Retrieve Information

the body below her was her twin sister (link).

(8) A woman (W.H. Westley) said that at her son's funeral her heart fluttered, and she found herself high above the funeral attendees, addressed by the very son who had died (link).

(9) Ami Greenstead suffered from a rare illness causing many fainting experiences, but reported to her mother that she had out-of-body experiences during such events, going up to the ceiling and observing her body from above (link).

(10) Bryce Bond reports that when hospitalized from an allergic reaction, he rose up out of his body to the ceiling, before traveling through a dark tunnel, and meeting a dead relative he recognized (link).

(11) Dick Battista reported floating above the operating table during a transplant operation and watching the surgeons do their work (link).

(12) Marjorie Hall reported that she had an out-of-body experience during childbirth. She says, "I felt myself lift out of my body and float upward." She reported seeing from above her body giving birth, at a height about 15 feet (about five meters) above the scene (link).

(13) On page 95 of a book we read this account by Cromwell Anderson:

"One night I awoke to find myself floating over my body, a few feet from the ceiling and could see my physical body on the bed beneath me.

(14) Below is an account of a man who was in an armored car hit by an an anti-tank shell:

"I was conscious of being two persons -- one, lying on the ground in a field where I had fallen from the blast, my clothes, etc., on fire ...The other 'me' was floating up in the air, about twenty feet from my body, from which position I could see not only my other self on the ground, but also the hedge, the road, and the car, which was surrounded by smoke and burning fiercely."

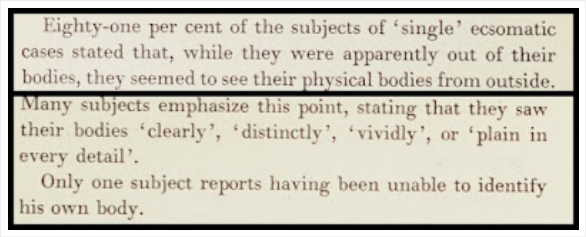
The person reported telling himself to roll to put out the fire, and then once he did, his perception returned to normal. The account appeared on page 207 of the March-April 1948 edition of the Journal of the Society for Psychical Research, which can be read here.

On page 123 of the 1954 Proceedings of the American Society for Psychical Research (Volume 48), which you can read here, we read of a poll done of 42 students who were asked: "Have you ever actually seen your physical body from a viewpoint completely outside that body, like standing beside the bed and looking at yourself lying in the bed, or like floating in the air near your body?" 33% answered "Yes."

In 1968 there appeared the book *Out-of-the-Body Experiences* by Celia Green, the Director of the Institute of Psychophysical Research at Oxford University. Registered users at www.archive.org can read the book here. In 1966 an appeal had been made by radio for accounts of people who had such experiences. About 400 responses were received. Two questionnaires were

- Exhibit A Suggesting Scientists Don't Understand How a Brain Could Store a Memory
- The Dubious Dogma That Brains Make Decisions
- Long Article Tries to Show Neural Memory Storage, but Gives No Real Evidence for It
- How Evidence for ESP Undermines the "Minds Come From Brains" Dogma
- Gender Differences in Brains Help Discredit Prevailing Dogmas About Brains
- Study Finds Equal Brain Connectivity in All Mammals
- Some Reasons the Main Theory of Neural Memory Storage Is Unbelievable
- Scientists Can't Persuasively Explain How a Brain Could Instantly Retrieve a Memory
- The Lack of Evidence for Memory-Storage Engram Cells
- Candid Confessions of the Cognition Experts
- Global Workspace Theory Sure Isn't an Explanation for Consciousness
- When Animals Cast Doubt on Dogmas About Brains
- Memories Can Form Many Times Faster Than the Speed of Synapse Strengthening
- The Guy with the Smallest Brain Had the Highest IQ
- He Had Half a Brain and Above Normal Intelligence
- The Truth About Neurons and Synapses
- A Diagram of Explanatory Dysfunction in Academia
- The Brain Shows No Sign of Working Harder During Thinking or Recall
- More Evidence of High Mental Function Despite Large Brain Damage
- The Lack of a Viable Theory of Neural Memory Encoding
- More Evidence That Neuron Loss Has Little Effect on Cognition
- Fraud and Misconduct Are Not Very Rare in Biology
- Reasons for Doubting Thought Comes from the Frontal Lobes or Prefrontal Cortex
- Why Most Animal Memory Experiments Tell Us Nothing About Human Memory
- Other Evidence of Human Paranormal Abilities

sent to these people, and 326 replied to the first, with 251 to the second. On pages 42 to 43 she stated this:



Eighty-one per cent of the subjects of 'single' ecsomatic cases stated that, while they were apparently out of their bodies, they seemed to see their physical bodies from outside.

Many subjects emphasize this point, stating that they saw their bodies 'clearly', 'distinctly', 'vividly', or 'plain in every detail'.

Only one subject reports having been unable to identify his own body.

On page 46 Green says this:

"The great majority of subjects describe themselves as looking down on their physical bodies. The subject frequently refers to his ecsomatic position as being near the ceiling -- e.g 'suspended against the ceiling.' Again, the corner of the ceiling is often specified."

On page 107 of Green's book we have this account:

"I remember nothing whatsoever of the process of leaving my body, but 'awoke' early next morning being fully conscious of the real me floating near the ceiling in a prone position. The sensation was of total weightlessness and freedom, and was altogether most delightful. I observed my physical body lying on the bed sleeping peacefully, on my left side as usual, but was struck by the extreme pallor the skin of my face which looked as if it would have been stone-cold to the touch."

Robert Crookall noted quite a few observers who reported floating horizontally above their bodies at a distance of about one or two meters:

"A number described their newly released 'doubles' as occupying a remarkable position, namely horizontal, just above the vacated body. They were J. McCormack (who noted 'this rather odd position'), Miss Bazett (about three feet above), Mrs. C. H. Smith (about a foot above), Mulvey (about three feet above), Dennis, Mr. 'H,' Mrs. Boorman, Dr. Gilbert, Mrs. Hibberd, Miss Douglas, Nurse Normanby, Mrs. 'Horam,' Miss Dean, G. Lester, and Mrs. Folson (when she was a child of five or six years). More than a score of others, who did not describe the horizontal position, did note that their 'doubles' were above their bodies."

Below are some cases from one of the books of Robert Crookall:

- Case #161. A Mrs. J. Douglas Newton reported this: "My son, then 8 years of age, who had never heard of any¬ thing of this sort, had gone to bed one night and was lying reading. Suddenly he called rather urgently for me. I found him sitting up, rather scared. He said, 'Such a funny thing has happened. I was just lying reading when I felt I was rising into the air. I seemed to go up, near the ceiling. Then I looked down and could see myself lying in bed. I came slowly down.' "
- Case #162. A B. Barrett reported this: "I was in perfect health when one night I found myself looking down at my earthly body and could not make out why it was not lying there dead as I thought."

- Why Brains Are Not Suitable for Storing Long Sequences Like Humans Remember
- Why Brain Scans Don't Show Brains Make Minds
- Why Strokes, Alzheimer's Disease and Drunkenness Don't Prove the "Brains Make Minds" Dogma
- Synaptic Density Studies Contradict the Most Popular Memory Theory
- The Rare "Total Recall" Effect That Conflicts with Brain Dogmas
- Physical Connections Do Nothing to Explain Cognition
- The Sociological Reasons Why Bad Explanations Persist in Academia
- Split-Brain Cases Conflict with "Brains Make Minds" Dogma
- Why So Much of Neuroscience News Is Unreliable
- An Analogy Clarifying Why the "Brain Stores All Your Memories" Dogma Is Untenable
- Why Darwinism Fails to Explain the Human Mind
- What Is It That a Brain Does?
- Cloud Computing and a Non-Local Model of Consciousness
- Why We Do Not Understand the Origin of Complex Biological Innovations
- Our Minds May Arrive Top-Down Not Bottom-Up
- Fancy New Technology Fails to Prove Memory Dogmas
- The Argument for Determinism Collapses Once We Discard the "Minds Come from Brains" Dogma
- Animal Experiments Conflicting with the Dogma That the Brain Stores All Memories
- Memory Recall Reality Versus the "We Can't Remember Well" Bunk of Professors
- Neuroscientists Keep Using Misleading Coloring in Brain Visuals
- Most Scientists Don't Follow Formal Evidence Standards, Unlike Judges
- Experimental Evidence for ESP Is Well-Replicated
- Imaging of Dendritic Spines Hint That Brains Are Too Unstable to Store Memories for Decades
- NIH Bets $1,434,188 That Synapses Don't Store Memories
- A New Case of Very Large Brain Damage and Normal Mental Function
- When Clue-Blind Professors Ignore All the Signs

- Case 165. A Mrs. Lambert reported this: "Suddenly I shot out of my body. I lay about six feet up, looking down at myself."
- Case 170. A Peter Urquhart stated this: "I went outside and found myself out of the body again. This time the sensation was like being in a balloon, attached by a cord somewhere in the region of the navel, like the umbilical cord."
- Case 172. A Mrs. Argles reported this: "I found myself standing on the top of the steps, looking down on my body, lying on the floor. There was a cord connecting me to the body on the floor."
- Case 173. Vera Oates stated this: "In the early hours of the morning I was suddenly wide awake, but, to my amazement, I was hovering between the railing and the bed. I looked down and saw myself on the bed."
- Case 175. A Mrs. Harris stated this: "I have left my body many times, walking round the room and looking at my body which is joined by a cord." Reports of such a cord connecting body to soul are not very rare.
- Case 183. A Mrs. M. F. Hemeon stated this: "Suddenly I felt myself 'swimming' up out of my body...I was very startled, and by an effort of will... returned to my body."
- Case 194. A woman states, " Suddenly I was floating with my nose almost touching the ceiling—I saw all the little imperfections in the distemper."
- Case 201: An R. J. Carlson states, " I suddenly found myself out of and above myself—and yet I could either sense or see my body in bed."
- Case 204: A Rebecca Schreiber stated "I suddenly felt I had left my body and was flying over the ocean until I came to the ship" (the Queen Mary) that her daughter was on. After asking her daughter what was wrong, and being told she was sea-sick, she told her daughter she would soon feel better. Her daughter later said she had an experience matching this visitation account, while on the ship, at about the same time.
- Case 236. Oscar Mockler stated, "The next thing I was aware of was standing on the floor of the cabin and looking down at my body lying asleep in the bunk."
- Case 241. Mrs. N. Matile stated this: "I found myself floating above my bed (about three feet above). I then quickly passed out of the window to the middle of the Mews where we were living. It was a starry night and it was a lovely feeling, floating in the air. "
- Case 243. An M.E. Fearn stated this: "I felt myself arise and float off the bed and ... was at the foot of our bed, looking at myself asleep, facing my husband's back. Then I floated towards the window."
- Case 246. A Mrs. Eyres stated, "I had a feeling that the real Me came out of my body through the head and I had the

- Why Neuroscience Hasn't Delivered for Psychiatry
- Panpsychism Arguments Involve an Equivocation Fallacy
- He's Strangely Seeking Memories in Cells Below the Neck
- Just Call Them "Machine-Metaphor-Misguided"
- Way Off in Their Predictions, Neuroscientists Keep Misdescribing Human Memory Performance
- The Biggest Brain Projects Are Still Failing to Support Prevailing Brain Dogmas
- A New Paper Reminds Us Neuroscientists Can't Get Their Story Straight About Memory Storage
- NSF Grant Tool Query Suggests Engrams Are Not Really Science
- Suspect Shenanigans When You Hear Claims of "Mind Reading" Technology
- No, a USC Team Did Not Show "How Memories Are Stored in the Brain"
- Why ESP Discredits the "Brains Make Minds" Claim
- Beware of Neuroscientists Using Cell Nicknames
- The Press Often Gives Us Fake News About Brains
- No Solid Principle Justifies "Brains Make Minds" Thinking
- "Thousands of Participants Are Needed for Accurate Results," But Most Brain Scan Studies Don't Even Use Dozens
- Why the Academia Cyberspace Profit Complex Keeps Giving Misleading Brain Research Reports
- "Brains Make Minds" Idea Flunks an Audit of a Large Brain Scan Database
- Big Study Finds Brain Gray Matter and Cortical Thickness Peak at Age 6 or Earlier, Contradicting Brain Dogmas
- Why the "A Memory Is Stored Throughout the Brain" Idea Makes Things Much Worse
- Principles of a Post-Materialist Science
- EEG Studies Fail to Provide Robust Evidence That Brains Think or Retrieve Memories
- Seven Things in Fast Retrieval Systems, None of Which Your Brain Has
- Studies Debunk Hippocampus Memory Myths
- 11 Authorities Seem to Realize That "Your Brain Is a Computer" Is a Junk Metaphor

sensation of flying." She claimed to have visited other countries in out-of-body experiences.

- Case 247. A Mrs. Watkin claimed to be visited by two figures who took on a visit to some spirit world. She states this: "I was brought back to my bedroom and there the three of us again stood looking at my lifeless-looking body. Suddenly I slipped easily and swiftly into it."
- Case 259. A Miss Douglas stated this: ""One night I awoke from sleep to find that I was in a horizontal position and suspended in mid-air. In this position I travelled at moderate speed through the bedroom windows out into the night. It was moonlight and I could see the houses very clearly. I felt thrilled as I travelled along ...It was so real. I drifted across the roof-tops and identified the neighbours' gardens. ... On the return journey I seemed to be losing height but not speed. ... Finally, I arrived in the garden at home, still remaining in a horizontal position and suspended in mid-air."
- Case 267. A Mr. Hall stated this: "Presently a most strange sensation passed through my body. Next I floated out through the window and across the town. I seemed to be several hundred feet above the ground."
- Case 269. A Mrs. Flint stated, "One afternoon, while resting on my bed, I felt myself floating, or rather suspended in the air, and I was actually looking down at my body on the bed."
- Case 285. A Mrs. Mansergh stated this: "In February, 1939, my husband and I retired to bed as usual and I awoke to find myself standing by the side of the bed looking down on the sleeping forms of my husband and myself. I moved away from the bed to the window. As I moved, I noticed a glistening cord trailing from me."
- Case 309. A G. Bradley stated this: " I awoke about 7 a.m., and had the sensation of leaving the body. All I could see was the frame of myself left in the bed. I was floating around the room feeling peaceful. Suddenly I had the urge to get back into the shell of my body. What a struggle I had to do it!"
- Case 310. A Mrs. Shakespeare stated this: "During the night I seemed to float down the ward and then returned and hovered over my bed, looking down at myself. I felt calm and peaceful."
- Case 313: A Mrs. Fyal stated this: "Suddenly I felt myself leaving my body and looking around my bedroom... I saw my own body...Suddenly I found myself wandering again and floated to my body where, in the morning, I was astounded that I was in it."
- Case 314: A Mrs. Langridge stated this: "I was outside my body, suspended in air, and looking down upon my body. Three or four people were reviving me. I was in a pleasant state of freedom and thought, 'I wish these people would leave me alone!' "

- Don't Be Fooled: Well-Trained Chatbots Aren't Minds
- What the Neuroscientist Should Have Said When Asked About Mind Uploading
- Cognitive Effects of Epilepsy Surgery Clash with "Brains Make Minds" Dogma
- Evolution Does Not Explain DNA, DNA Does Not Explain Bodies, and Bodies Do Not Explain Minds
- "Brain Chemical Imbalance" Theory Is Fading Out as an Explanation for Mental Illness
- Why Plasticity and Neurogenesis Fail to Explain Minds That Work Well After Massive Brain Tissue Loss
- They're Calling It a Huge Memory Research Fraud, But Is It Only the Tip of the Iceberg?
- So Much Misleading Talk Occurs in Claims of a Scientific Consensus
- Shrink-Speaking About a Mere "Problem of Consciousness" Is As Wrong As Shrink-Speaking About a Mere "Problem of Human Shape Origination"
- Longtermism Is Fueled by a Goofy Belief in Computer-Generated Lives
- Given Their Narrow Studies and Slim Narrow PhD Dissertations, Why Are We So Swayed by Neuroscience PhDs?
- Some of the Weak Papers Neuroscientists Cite As Evidence for Their Chief Claims
- For Insight About Your Brain and Mind, Ponder the Never-Founds
- TV Medical Dramas Give Us Wrong Ideas About Minds and Death
- Brain Imaging Shows No Appreciable Neural Correlates of Memory Activity
- The Evidence Inversion Syndrome Blights Academia
- Poorly Designed Brain Scan Experiments Needlessly Put the Needy at Risk
- Science Literature Is Full of Misleading Claims About Brain Waves
- The US Government's False Claims About DNA
- If Neuroscientists Acted Like Cosmologists, They Might Say You Have an Invisible "Dark Brain"
- Exceptionally Fast Thinking Cannot Be Explained by Slow Brains Like We All Have
- Scientists and Clergy Have Much in Common
- 30 Things That Would Never Occur If Prevailing Neuroscientist Dogmas

- Case 327. Dr G. B. Kirkland stated this: "To my surprise, I found myself looking at myself lying on the bed. The thought; just flashed through me that I didn't think much of me —in fact, I didn't approve of me at all. Then I was hurried off at great speed. Have you ever looked through a very long tunnel and seen the tiny speck of light at the far end ? It seems an incredible distance off. Well, I found myself with others vaguely discernible hurrying along just such a tunnel or passage—smoky or cloudy, colourless, grey and very cold."
- Case 336: An F. W. Talbot stated this: "The next moment I was suspended in mid-air, horizontal, and looking down at my body on the bed. I could see myself lying in bed quite clearly. I watched an attendant go to my body, lift my arm and plunge in a needle. This was extremely interesting; I was suspended over his head and my feeling was that of detached curiosity."
- Case 337: A Mrs Rowbotham stated, "I remember being on the ceiling of the room looking down at the two doctors and two nurses—just floating and watching."
- Case 339: A Kathleen Snowdon stated this: "Suddenly I realized a feeling of great excitement, wonder and delight surpassing anything I had ever experienced as I felt my body ['double'] completely weightless and floating upwards in a golden glow towards a wonderful light around hazy welcoming figures and the whole air was filled with beautiful singing. I floated joyfully towards the light and then I heard my mother's voice calling me. My whole being revolted against going back."
- Case 343: An S. H. Kelly stated this: "As I lost consciousness, certain things in my life came in front of me. This was followed by a queer sound of music and the next thing I was suspended in mid-air and looking at them bringing my body out of the water and trying artificial respiration. I was very happy and free and wondered why they were doing that when I was here! At that moment I was transported to my mother's room. I stood beside her as she was by the fire in an easy chair, trying to tell her I was all right and happy. Afterwards, I was back, looking at my body, when a brilliant light shone around me and a voice said, 'It is not your time yet—you must go back. You have work to do!' "
- Case 346: A Mrs. Maries stated this: "Meanwhile I had left my body and felt myself floating in what seemed like a dark tunnel (with a glimpse, at the end, of a lovely countryside). I had no pain, only a wonderful feeling of happiness. I felt I had somebody with me, but saw nobody. Only I heard a voice which said, 'You must go back! That child needs you!' I returned to my body and heard the doctor say, 'No, by Jove, I can still feel her heart!' "

A year 2025 scientific paper on out-of-body experiences involved interviews with ten subjects. We read this:

Were True
- "Brains Make Minds" Models All Flunk a Large Brain Scan Study
- The Philosophy of Teleospiritism
- The Biggest Blunders of Theories Such as Integrated Information Theory
- Study Finds No Robust Link Between Brain Structure and Personality
- The Two Huge Mistakes Involved in Typical Talk of a "Hard Problem of Consciousness"
- Neuroscientists Keep Wrongly Assuming the Source of Something Must Be Near Its Observed Manifestations
- The Vague Unfounded Boasts of Biology Sound Like the Vague Unfounded Boasts of Astrophysics
- 8 Reasons for Doubting Claims of the Heritability of Intelligence
- Widely Read Scientific Paper Asks, "What If Consciousness Is Not an Emergent Property of the Brain?"
- Exhibit A Suggesting Scientists Don't Know How a Brain Could Retrieve a Memory
- Exhibit B Suggesting Scientists Don't Know How a Brain Could Retrieve a Memory
- More Indications Scientists Don't Understand How a Brain Could Think or Remember
- Studies New and Old Fail to Show a Big Link Between Brain States and Minds
- Free E-book: Failing Dogmas of Brain Researchers
- Wobbly Hand-Waving Guesswork of the Synapse Memory Theorists
- Cryogenic Electron Microscopy Helps Clarify Synapses Bear No Resemblance to Information Storage Structures
- Did a Stealth Religion Infiltrate Academia?
- Human Thoughts and Memory Are Gigantically Connective, But Brains Have Only Low Connectivity
- Exhibit A Suggesting Scientists Have No Understanding of How a Brain Could Imagine Anything
- There Is No Evidence of a Neural Explanation for Out-of-Body Experiences
- Misleading Claims in Attempts to Naturally Explain Near-Death Experiences and Out-of-Body Experiences
- The Latest Evidence That Scientists Trying to Explain Memory Creation

"Participants 1 and 4 saw their bodies from the ceiling, while participant 7 saw theirs from another part of the room. Participant 8 had the experience while sitting on a street bench and viewed their body from the sky, approximately at the height of a second floor. ...Participant 9 saw his body from behind while walking."

The number and consistency of these accounts I have quoted is very high, ruling out any explanation of hallucination. Hallucinations produce random content, not accounts that would appear with such consistency as we find in the accounts above.

Feature #2: a strong feeling of euphoria or exaltation during an out-of-body experience

I have already quoted several cases above of people reporting an exhilaration or euphoria during an out-of-body experience, including a mention of "a wonderful feeling of happiness" by Mrs. Maries. a feeling by S. H. Kelley that she was "very happy," a feeling of "great excitement, wonder and delight surpassing anything I have ever experienced" by Kathleen Snowdon, and a statement by Miss Douglas that she "felt thrilled," Below are some more relevant examples:

(1) On page 40 of the January 22, 1932 edition of the periodical Light, which you can read here, a doctor describes an out-of-body experience, saying, "I cannot describe the sensation of peace and happiness."

(2) On page 46 of the February 8, 1919 edition of the periodical *Light,* which can be read here, we hear an account by Captain Gilbert Nobbs of getting a severe head injury during World War I. Just before saying, "I seemed for a moment somewhere in the emptiness looking down at my body lying in the shell-hole,″ Nobbs says, "There was a peacefulness... a happiness indescribable."

(3) On pages 57-58 of an Italian book (the text of which can be easily translated using Google Translate), we read that Mrs. Nathalie Annenkof reported an out-of-body experience, says this:

"I had the sensation of hovering above my body in complete bliss. I had the sensation of a great and luminous joy of living, as if I were living a thousand lives at once, and of complete tranquility."

(4) On page 63 of a book, we read an account by Joseph Costa of an out-of-body experience. He says, "If I said that I felt free, light, ethereal, I would only be expressing from afar the sensation that I felt in this moment of infinite liberation...I never had such a vivid sensation of really existing as in the moment when I felt separated from my body."

(5) On page 59 of the November - December 1945 edition of the Journal of the Society for Psychical Research, which you can read here, we have this account of bliss during an out-of-body experience:

"*Then, I can only describe this my own way, I was given psychic vision, for **my Spirit left my body which I saw by my wife's in bed**. I seemed to resemble the shape of a flame with a long silver thread attached to my earth body. I enjoyed, what I can only liken to, the Peace of God which passeth all understanding, I have never enjoyed such mental exhilaration before or since."*

Are Lost in the Woods
- Study Suggests Massive Faking in Neuroscience Papers
- How Neuroscientists and Science Writers Try to Fool You Into Thinking Brains Store Memories
- Some People Our Neuroscientsts Don't Want You to Know About
- 10 Reasons Synapses Cannot Be a Storage Place for Human Memories
- Why Most Correlation-Fishing Experimental Neuroscience Is Worthless
- Pharmaceutical Company Entanglements Cloud the Objectivity of Neuroscientists and Psychiatrists
- The 4 Nonsensical Parts of the Tale Your Brain Instantly Retrieved an Answer Learned Long Ago
- Neuroscientists Don't Seem Like Paragons of Diligence
- "Brain Is the Most Complex Object in Universe" Claim Exemplifies Credulity About Brain Claims
- Exhibit A That Scientists Have No Understanding of a Physical Basis of Human Memory
- Goofs of the Site Brainfacts.org
- Shady Tricks Used by Writers About the Brain
- The 11 Biggest Neural Shortfalls Hinting Brains Don't Make Minds
- Analysis of 23,810 Brain Scans Finds "Neither Structural Nor Functional Imaging Predicted Individual Psychology"
- All Papers Relying on Rodent "Freezing Behavior" Estimations Are Junk Science
- The Human Brain Project Spent Billions, But Failed to Bolster Claims About Brains Making Minds
- Hydrocephalus Studies Confirming Low Correlation Between Brain States and Intelligence
- The Lack of Evidence That Brains Produce Dreaming, and Some Evidence Hinting They Don't
- How the Academia-Cyberspace-Pharmaceutical-Biotech-Publishing Complex Incentivizes Bad Brain Research
- The Lack of Correlation Between Most Mental Illness and Brain States
- They Stored and Studied Thousands of Brains, But Still Failed to Show Mental Illness Comes From Sick Brains
- They Stored and Studied Thousands of Brains, But Still Failed to Show Brains Store Memories

(6) A man having an out-of-body experience said that he felt more alive than ever before (link).

(7) Case 346 mentioned above mentioned "a wonderful feeling of happiness" during an out-of-body experience.

On page 39 in her book about out-of-body experiences, based on a survey of hundreds who had such experiences, Green says, "Many subjects comment on their feelings of well-being and reality in their new position apart from their physical body, and there are no counter-instances, that is to say, no subjects remark on having felt incomplete, unsubstantial or unreal in their new position." On page 86 she quotes someone who had an out-of-body experience saying that she felt "the utmost joy and happiness." On page 87 she quotes someone having an out-of-body experience as saying, "The escaped me felt absolutely wonderful, very light and full of the most wonderful vitality, in fact more well than I have ever felt before or since."

The author of a 2023 PhD dissertation ("Investigating the Nature and Psychological Impact of Out-of-Body Experiences") performed an online survey of 213 people who claimed to have had an out-of-body experience (page 156). He states that 47% reported "a feeling of bliss or happiness" (page 451).

Feature #3: an experience of being able to pass-through matter while having an out-of-body experience.

(1) In the article "Astral Excursions" by Franz Hartmann MD, which appears on page 159 of the March 1908 *Occult Review*, which can be read here, Hartmann describes an out-of-body experience. He says that during this experience "when I tried to lift one of the instruments on a little table next to the chair, I could not do so, as my fingers passed through it."

(2) A report of an out-of-body experience can be read in the 1936 book '*Twixt Earth and Heaven* by Annie Britain, which you can read here. On page 50 she states this:

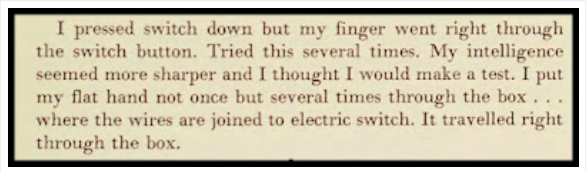
"***I tried to grasp and move some cups and saucers in the room, but my fingers passed through them as if they were shadows.*** *On the same occasion I tried to slap and pinch the faces of the people in the room but could make no impression on them, and they did not take the least notice of me.* I walked through a table as though it were an optical illusion. *I remember feeling amused to think that I was so superior to flesh and blood, which usually comes off second best in encounter with wood, stone or steel. Tables, chairs, walls, the bodies of humans, seem as unsubstantial as shadows when one is out of the body."*

On page 56 the author states this:

"I woke to find myself standing outside my body, gazing at the sleeping form in the chair. My cousin was by my side, a young man who had died some years before, and to whom I had been deeply attached. I was not greatly surprised to see him, as he had often escorted me on my spirit travels. Now he offered to take me out for the afternoon and see some of the spirit people. ***We passed out through the walls of the room****, seeming to glide rather than to walk, with no more sense of motion than if we had been in a balloon."*

- Major Journal Suggests 3% of Biology Papers Look Like Paper Mill Junk
- This Is What Built the Mighty Castle of Materialism
- Comparing the Dogmas of Cosmology and Biology
- Why Scientific Academia Is Like an Organized Religion
- How to Interview an Overconfident Biologist
- Neuroscientists Claim "Drifting Representations," But It's Mainly Just Their Pareidolia
- Neuroscience "Best of 2023" Reviews Suggests They're Getting Nowhere Trying to Explain Minds by Neural Explanations
- Convoluted "Spaghetti Code" Analysis Pathways Help Neuroscientists Conjure Phantasms That Don't Exist
- 50 Types of Questionable Research Practices
- Cox's Cases Were Better Explained as Evidence Brains Don't Make Minds
- No, Scientist, That Isn't Human Memory or Brain Action, But Merely Computer Activity
- You Would Never Guess From Her Videos That She Has No Frontal Lobes
- Neuroscientists Often Sound Like They Never Seriously Studied Psychical Research
- DNA Is Not a Blueprint, So "All Bets Are Off" About Body Origins and Mind Origins
- Universities Continue to Boast About Pitifully Weak Neuroscience Results
- A Biochemist's Promissory Note About Explaining Minds Sounds Very Lame
- No One Is Actually Doing Thought-Reading by Scanning Brains or Reading Brain Signals
- A Biologist Calls "Orthodox Science" a "Religion" and "Belief System"
- She Has Photographic Memory and Severe Unmanageable Epilepsy
- Traumatic Brain Injury Results Clashing With Prevailing Dogmas About Brains
- "Cells With Minds" Theory Is As Bad As "Brains Make Minds" Theory
- Surprising Studies on Memory Loss or IQ Changes After Brain Surgery or Brain Damage
- Pareidolia Helps Neuroscientists Getting Nowhere Trying to Show a Brain Basis for Memory

(3) On page 69 of Green's book we read this account of someone able to pass his hand through solid matter while having an out-of-body experience:


I pressed switch down but my finger went right through the switch button. Tried this several times. My intelligence seemed more sharper and I thought I would make a test. I put my flat hand not once but several times through the box . . . where the wires are joined to electric switch. It travelled right through the box.

(4) On page 124 of the October, 1954 edition of the Journal of the American Society for Psychical Research, we read this:

"Of the students who reported having seen their physical bodies from outside positions, more than one-fourth said that during such experiences they seemed to be occupying another body, which seemed to be real, tangible, and capable of voluntary movement. More than two out of five reported that, during their out-of-the-body experiences they seemed to be able to pass through seemingly solid objects—like closed doors, or blank walls."

(5) On page 47 of the study here, we have one person's account of an out-of-body experience, one that has Feature #1, Feature #3, and Feature #4.

"I was very awake standing at the bathroom sink getting ready to shave. With no warning ***I soon found myself looking at my physical body from about 3 feet in front of me*** *and slightly elevated. After assessing my facial expression which did not change I moved towards the other side of the bathroom* ***noticing how incredibly vivid the wall paper appeared****. I then was confronted with the shower wall and decided to continue* ***realizing that I could go right through the wall****."*

(6) On pages 254 to 255 of the 1895 book *Brown Studies* by George H. Hepworth, we have a description of an out-of-body experience, one that includes an account of being able to pass through matter. We read this:

"While sitting with my right hand resting on the arm of the chair ***I seemed to step out of my body, and stand beside it****, looking upon it with mingled curiosity and astonishment. I felt as light as air, and said to myself, 'This must be what St. Paul calls the spiritual body.' It is true that I looked on what sat in the chair with a kind of tenderness, but the sense of freedom which I soon became conscious of was almost ecstatic, and it seemed as though I would not go back into those narrow quarters again for worlds. The body was so clumsy, so heavy, so un comely, so uncouth and ungraceful, while this other body, on the contrary, was a delight, a dream, a poem....I moved away from my body toward the door, thinking to open it and go out into the starlight ;* ***but to my surprise I found that the door was no obstruction whatever. I simply passed through it as the sun's rays pass through a pane of glass."***

The author of a 2023 PhD dissertation ("Investigating the Nature and Psychological Impact of Out-of-Body Experiences") performed an online survey of 213 people who claimed to have had an out-of-body experience (page 156). He states that 40% reported "the ability to pass through physical matter" (page 451).

Feature #4: an experience of having enhanced senses during an out-of-body experience, which may include the ability to see through walls or

- HSAM Memory Whiz Subjects Scored 25 Times Higher on a Random Dates Test
- How High-Speed Life Reviews in Near-Death Experiences Discredit "Brains Make Minds" Claims and "Brains Store Memories" Claims
- More Indications That Scientists Have No Understanding of How a Brain Could Think
- Searching Hard for Evidence of Strokes Causing Loss of Episodic or Conceptual Memories, They Come Up Short
- Cognitive Neuroscience Is Floundering, So the Kavli 2024 Neuroscience Prize Went to Low-Quality Research
- We Cannot Trust Neuroscientists to Speak Accurately About What Brains Do and What Minds Experience
- The Mythology of "Memory Maintenance Molecules"
- No, Noise Miners, Neurons Don't Encode Words
- The Lack of Bodily Addresses Crushes the Credibility of Mechanistic Biology and Mechanistic Psychology
- She Didn't Seem to Need the Right Half of Her Brain, and Losing It Did Not Seem to Dim Her Memories
- 60+ Aspects of the Human Mind, and Whether Brains Explain Them
- Papers Claiming Brain Memory Storage Keep Citing Poor Science Papers
- A Report of "Unimpaired Faculties Without a Brain" (John Bly)
- Exhibit A That There Is No Such Thing as a Chemical Root of Consciousness
- Look Very Closely at a Study Claiming Thought Reading of Brains, and You'll Find the Shady Tricks Behind It
- UK Biobank Study of Thousands of Brains Finds Negligible Correlation Between Brain Size and Intelligence
- Neuroscientists Senselessly Think They Can Perform Innumerable Contortions of Brain Data, and Then Claim a Discovery
- They Mapped 150 Million Synapses, and Found No Sign of Stored Memories
- Brains Show No Physical Signs of Reading or Retrieval When You Recall Something
- In 1941 the Editors of Scientific American Confessed That Telepathy Was Proven
- Old Newspaper Stories Relevant to Whether Brains Make Minds

look inside the body as if you had x-ray eyes, or the ability to see a 360 degree view.

(1) On page 70 of a book an author quotes Eugenie Garcia as having an out-of-body experience, apparently while being hypnotized:

" *I cast my eyes on myself: 'Look! I am luminous, transparent, light as a feather.' Suddenly, I saw my body lying motionless in an armchair. Three or four people surrounded me, watching me attentively. What are they looking at me like that? Let's see. I come closer and look at myself too. doing like everyone else.* ***I could clearly see the inside of my body, I could see the heart beating, the blood circulating, the networks.*** *."*

(2) On page 63 of a book, we read an account by Joseph Costa an out-of-body experience. Speaking as if he had X-ray vision, he says, "*I saw my body perfectly recognizable by its particularities, its profile, my figure, but also bundles of veins and nerves vibrating with a luminous tingling."*

(3) On page 62 of his book *Lessons From the Light*, Kenneth Ring quotes an account received by him in a letter, in which a woman described an out-of-body experience (when she says "three hundred degree" she apparently means "three-hundred-sixty degree"):

"I was hovering over a stretcher in one of the emergency rooms at the hospital. I glanced down at the stretcher, knew the body wrapped in blankets was mine, and really didn't care...I could see the tiles on the ceiling and the tiles on the floor, simultaneously: three hundred degree spherical vision. And not just spherical. Detailed! I could see every single hair and the follicle out of which it grew on the head of the nurse standing beside the stretcher."

(4) On page 37 of the same book, Ring quotes a male witness who claimed to see a womanly figure of light during his out-of-body experience. He recalls this when looking at his body:

"I could see the vascular system and the chambers emptying and filling with blood. I could see the vascular system and the life-sustaining materials working their way through the entire body. "

(5) On page 60 of the same book, a nearsighted woman recalls "the next I was aware of was floating on the ceiling" and that at this time "it was so vivid" and that "I could read the numbers on the machine behind my head."

(6) On pages 254 to 255 of the 1895 book *Brown Studies* by George H. Hepworth, we have a description of an out-of-body experience. On page 255 he seems to describe enhanced vision during such an experience:

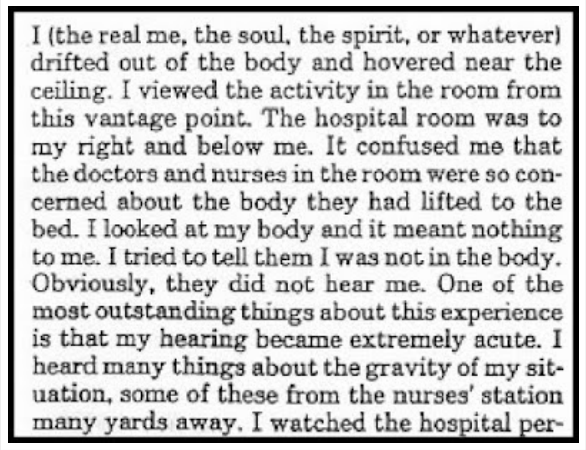
"I shall never be able to tell you how the stars looked that night. The heavens were an astonishing revelation to me. Not only did I see with perfectly clear vision, but there seemed to be a penetrating, a far-reaching quality to my sight which doubled the number of glistening lights above me, and the spectacle was so marvelous, so beautiful, that I stood entranced."

On page 256 the author compares his enhanced vision during his out-of-body experience to an account he heard of a very nearsighted boy who was given

- Newspaper Accounts of Memory Marvels (Part 1)
- Why Your Brain Is Not Like a Computer
- They Memorized Many Times Faster Than a Brain Could Ever Do
- Faltering Neuroscientists Improperly Offer Computer Science Papers as Examples of Neuroscience Progress
- The Brains of 60 Subjects Seemed to Look the Same During Eyes Closed Mental Rest, Recall and Math Activity
- The Problem of Explaining Human Minds Is a Million Times Larger Than a Mere "Problem of Conscious Experience"
- Large Neuron Groups Cannot Be Sequentially Traversed, So Brains Cannot Store Complex Learned Information
- Eyes and Minds Can Focus, But Brains Cannot Physically Focus
- Most Subjects in Neuroscience Research Do Not Understand the Risks They Are Taking
- Neuroscientists Cannot Credibly Explain Any of These 11 Features of Out-of-Body Experiences
- Microscopes Will Never Find the Slightest Trace of Learned Information in a Human Brain
- Newspaper Accounts of Memory Marvels (Part 2)
- The Reason You Will Never Be Able to Upload Your Mind Is the Same Reason You Won't Ever Need To
- Brain Tumors Seem to Have Relatively Little Effect on Cognitive Function
- Newspaper Accounts of Memory Marvels (Part 3)
- They Mentally Calculated Faster Than a Brain Could Ever Do
- Claimed Evidence for "Concept Cells" Is Just Noise-Mining Nonsense
- More Candid Confessions of the Cognition Experts
- Neuroscientists Offer Only the Most Hazy Hand-Waving When Trying to Explain Memory
- List of Breakthrough Prize Winners in Life Sciences Hints at the Lack of Progress in Cognitive Neuroscience
- HSAM Wonder Daniel McCartney Was a Math and Memory Marvel
- LTP Research Has Done Nothing to Show Any Neural Basis for Memory Creation
- The Lack of Strong Links Between Mental Illness and Brain States

glasses and who could suddenly see the world clearly for the first time.

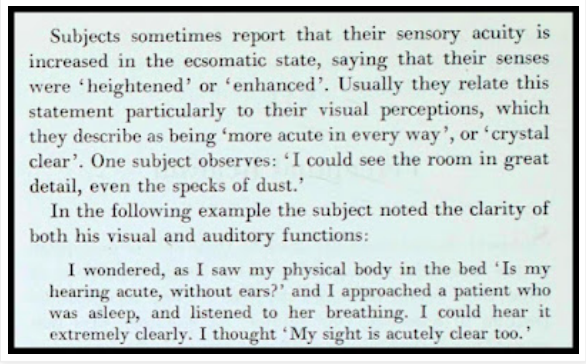
(7) In the account below (from page 393 of the paper here) a person having an out-of-body experience reports having enhanced hearing (the account has both Feature #1 and Feature #4):



I (the real me, the soul, the spirit, or whatever) drifted out of the body and hovered near the ceiling. I viewed the activity in the room from this vantage point. The hospital room was to my right and below me. It confused me that the doctors and nurses in the room were so concerned about the body they had lifted to the bed. I looked at my body and it meant nothing to me. I tried to tell them I was not in the body. Obviously, they did not hear me. One of the most outstanding things about this experience is that my hearing became extremely acute. I heard many things about the gravity of my situation, some of these from the nurses' station many yards away. I watched the hospital per-

(8) One person having an out-of-body experience said this: "I was suddenly not in my body but above it...I could see, but all around, as
if my mind ...had eye-facets all over."

On page 72 of Green's book on out-of-body experiences, we read this:



Subjects sometimes report that their sensory acuity is increased in the ecsomatic state, saying that their senses were 'heightened' or 'enhanced'. Usually they relate this statement particularly to their visual perceptions, which they describe as being 'more acute in every way', or 'crystal clear'. One subject observes: 'I could see the room in great detail, even the specks of dust.'

In the following example the subject noted the clarity of both his visual and auditory functions:

I wondered, as I saw my physical body in the bed 'Is my hearing acute, without ears?' and I approached a patient who was asleep, and listened to her breathing. I could hear it extremely clearly. I thought 'My sight is acutely clear too.'

On page 79 of Green's book she quotes someone who claims to have seen through a wall during an out-of-body experience.

Around page 59 of his book *Lessons From the Light*, Kenneth Ring begins discussing cases that seemed to show superior vision during out-of-body experiences. He mentions some cases of people who reported being able to see very clearly the dust that was in some high spot above their bodies, such as the dust on a hanging lamp. On page 60 he estimates that he encountered about six cases of what he calls the "dust on the light fixture" type. On the same page he quotes someone as saying that she could see in vivid detail during her our-of-body experience, even though she is very nearsighted, and at time was not wearing her glasses. On page 61 he quotes a first-person account of someone else who claimed he could see very clearly during an out-of-body experience, even though he was very myopic and not wearing glasses.

On page 76 of Green's book, she quotes someone who claims to have seen clearly in the dark during an out-of-body experience outdoors. On page 78 she

- Subject MM Had a Stupendous Memory for Facts, But a Normal Brain
- Lighting-Fast Readers Exceed the Speed Limits of a Brain
- They Too Mentally Calculated Faster Than a Brain Could Ever Do
- They Did Well After a Huge Loss of Brain Tissue
- Newspaper Accounts of Memory Marvels (Part 4)
- NIH's Million-Dollar "Epigenetic Memory" Bet Fails
- The Myths About Patient K. C. and Patient H. M.
- He Had Half a Brain But "Superior Intelligence"
- New Poll Suggests About 29% of Neuroscientists Doubt the Synaptic Memory Theory
- They Lost Huge Parts of Their Brains, But Their Knowledge and Recollection Were Preserved
- The Groundless Myth That "Floods" or "Surges" Help Explain Near-Death Experiences
- Physically Unrealistic NEPTUNE "Model" of Near-Death Experiences Is a Misleading Mishmash

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quotes someone who claims to have been able to see "in a full circle of 360" degrees during an out-of-body experience.

The study "Differences and Commonalities Among Various Types of Perceived Out-of-Body Experiences (OBEs) (Phase II)" analyzed 252 reports of out-of-body experiences, received by those who filled out questionnaires after responding to advertising asking for responses from people who had out-of-body experiences. On page 24 we read this: "*Some of the participants reported they were able to see a much wider area than before. This even included a visual perception spanning up to 360° in some cases. Although there was a question about the clarity of sight asked during both phases, the question did not mention anything about the field of their vision, so their comments about a broader form of sight were not directly solicited and their descriptions contain self-chosen terms (e.g., 360°, etc.).*" There then follows several quotes from survey respondents talking about 360 degree vision or "fish-eye lens" vision, and two respondents talking about a binocular or zoom ability. Page 26 quotes a person as saying "everything seemed very vivid, a higher definition," and quotes another person as saying, "I could see very clear and it looked crystal clear like it was the best high definition ever." The same page quotes another person as saying, "I could see everything perfectly clearly, which is odd because my glasses had fallen off my face in the accident."

The author of a 2023 PhD dissertation ("Investigating the Nature and Psychological Impact of Out-of-Body Experiences") performed an online survey of 213 people who claimed to have had an out-of-body experience (page 156). He states that 16% reported "the ability to see through physical objects" (page 450), that 23% reported "the ability to see at an abnormal distance" (page 450), that 45% reported "the ability to see in the dark" (page 450), and that 22% reported "the ability to see 360 degrees" (page 451).

The 2023 paper "Explanation of near-death experiences: a systematic analysis of case reports and qualitative research" has a chart listing common aspects of near-death experiences, and their frequency. The most common aspect was an out-of-body experience, and the second most common was "heightened senses," reported by 44 people.

Feature #5: an experience of being connected to the body while outside of it, sometimes with there being a cord-like or elastic structure between the observer outside of the body and his own body.

I have already cited above several cases in which Feature #5 was reported. Here are some more:

(1) On page 59 of the November - December 1945 edition of the Journal of the Society for Psychical Research, which you can read here, we have this account of a "long silver thread" between someone's spirit (outside of his body) and the body.

"*Then, I can only describe this my own way, I was given psychic vision, for **my Spirit left my body which I saw by my wife's in bed**. I seemed to resemble the shape of a flame with a long silver thread attached to my earth body."*

April 2025 (7)
March 2025 (8)
February 2025 (6)
January 2025 (5)
December 2024 (6)
November 2024 (4)
October 2024 (4)
September 2024 (5)
August 2024 (4)
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March 2022 (5)
February 2022 (4)
January 2022 (4)
December 2021 (5)
November 2021 (3)
October 2021 (3)
September 2021 (2)
August 2021 (3)
July 2021 (3)
June 2021 (2)
May 2021 (3)
April 2021 (3)
March 2021 (4)

(2) On page 103 we read of a novelist named William Gerhardi who had an out-of-body experience, one in which he seemed to experience the "silver cord" often reported in out-of-body experiences:

"At the back of me was a coil of light, like a luminous garden hose resembling the strong broad ray of dusty light at the back of a dark cinema projecting on the screen in front. To my utter astonishment, that broad cable of light at the back of me illuminated the very face on the pillows I recognized as my own, as if attached to the brow of the sleeper."

(3) On pages 116-117 of a book he author, Sylvan Muldoon describes his first out-of-body experience:

*"Slowly ...I was moving toward the ceiling, all the while lying horizontal and powerless. Naturally I believed that this was my physical body as I had always known it, but that it had mysteriously begun to defy gravity...Involuntarily, at about six feet above the bed, as if the movement had been conducted by an invisible intelligent force, present in the very air, I was uprighted from the horizontal position, to the perpendicular, and placed standing upon the floor of the room... where I remained for two or three minutes, still unable to move of my own accord... I managed to turn around. There were two of me! In the name of common sense — there were two of me! There was another 'me' lying quietly upon the bed. It was difficult to conceive of this being real — but there I was, fully conscious, fully able to reason and know what I saw was actual. The next thing which caught my eye, explained the curious sensation in the back of my head — for **my two identical bodies were joined by means of an elastic-like cord**, one end of which was fastened to the medulla oblongata region of my phantom counterpart, while the other end centered between the eyes of my physical counterpart. This cord extended across the space of probably six feet which separated us."*

(4) In his 1864 biography *Incidents in My Life*, Daniel Dunglas Home related an out-of-body experience. After hearing a mysterious voice that seemed to be that of his late wife, he had an experience he described below:

*"I was at this instant brought to a consciousness of light, by seeing the whole of my nervous system, as it were, composed of thousands of electrical scintillations, which here and there, as in the created nerve, took the form of currents, darting their rayons over the whole body in a manner most marvellous ; still this was but a cold electrical light and besides, it was external. Gradually, however, I saw that the extremities were less luminous, and the finer membranes' surrounding the brain became as it were glowing, and I felt that thought and action were no longer connected with the earthly tenement, but that they were in a spirit-body in every respect similar to the body which I knew to have been mine, and which I now saw lying motionless before me on the bed. **The only link which held the two forms together seemed to be a silvery-like light, which proceeded from the brain** ; and, as if it were a response to my earlier waking thoughts, the same voice, only that it was now more musical than before, said, 'Death is but a second birth, corresponding in every respect to the natural birth, and should the uniting link now be severed, you could never again enter the body.' "*

(5) In Case 170 quoted above someone stated "the sensation was like being in a balloon, attached by a cord somewhere in the region of the navel, like the umbilical cord."

February 2021 (3)
January 2021 (3)
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November 2020 (3)
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April 2020 (1)
March 2020 (1)
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September 2019 (1)
August 2019 (1)
July 2019 (2)
June 2019 (1)
May 2019 (1)
April 2019 (1)
February 2019 (1)
January 2019 (1)
December 2018 (1)
November 2018 (3)
September 2018 (1)
August 2018 (1)
July 2018 (1)
June 2018 (1)
April 2018 (30)

Labels

- "brain as computer" metaphor
- above-average IQ with huge brain tissue loss
- academia dysfunction
- acquired savant syndrome
- adult neurogenesis
- agenesis of corpus callosum
- aging
- AI
- Alzheimer's disease
- amnesia
- analytic idealism
- bad computer programming in neuroscience studies
- bad predictions by scientists
- bad psychiatric surveys
- bad psychiatry
- bilingualism with half a brain

(6) In Case 172 quoted above a Mrs. Argles reported this: "I found myself standing on the top of the steps, looking down on my body, lying on the floor. There was a cord connecting me to the body on the floor."

(7) In Case 175 quoted above a Mrs. Harris stated this: "I have left my body many times, walking round the room and looking at my body which is joined by a cord."

(8) In Case 285 quoted above a Mrs. Mansergh stated that during her out-of-body experience, "As I moved, I noticed a glistening cord trailing from me."

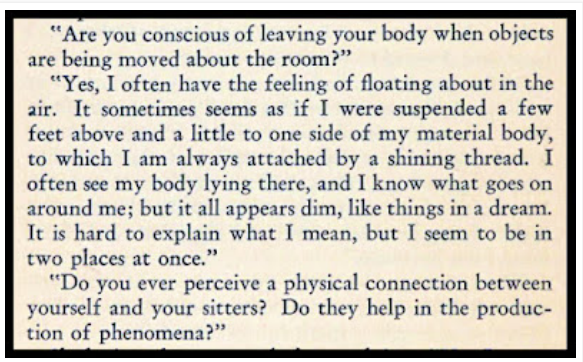
(9) On page 62 of the January 26, 1934 edition of the periodical *Light*, which you can read here, we have an account of an out-of-body experience in which the witness describes a cord between her regular body and herself out of the body.

(10) In an 1892 edition of the Proceedings of the Society for Psychical Research (Volume VIII, page 196), we have an account by L. J. Bertrand of an out-of-body experience he had 30 years earlier. He states this:

" 'Well,' thought I, 'at last I am what they call a dead man, and here I am, ***a ball of air in the air, a captive balloon still attached to earth by a kind of elastic string*** *and going up and always up. How strange ! I see better than ever, and I am dead—only a small space in the space without a body ! . . . Where is my last body ? Looking down, I was astounded to recognise my own envelope. ' Strange ! ' said I to myself. 'There is the corpse in which I lived and which I called me, as if the coat were the body, as if the body were the soul ! What a horrid thing is that body ! —deadly pale, with a yellowish-blue colour, holding a cigar in its mouth and a match in its two burned fingers ! Well, I hope that you shall never smoke again, dirty rag ! Ah ! if only I had a hand and scissors to cut the thread which ties me still to it."*

Although an account of what happened decades earlier, the credibility of this account comes from the fact that at the time it was made an account like this was almost totally unheard of, and some of the strange details would be corroborated by many later witnesses citing similar details involving their own experiences.

(11) On page 36 of his 1936 book *Forty Years of Psychic Research* Hamlin Garland asks a medium he is about to test a good question, and gets a response that will "ring a bell" with any serious scholar of out-of-body experiences. We read this:



"Are you conscious of leaving your body when objects are being moved about the room?"

"Yes, I often have the feeling of floating about in the air. It sometimes seems as if I were suspended a few feet above and a little to one side of my material body, to which I am always attached by a shining thread. I often see my body lying there, and I know what goes on around me; but it all appears dim, like things in a dream. It is hard to explain what I mean, but I seem to be in two places at once."

"Do you ever perceive a physical connection between yourself and your sitters? Do they help in the production of phenomena?"

- binary memory storage theory
- biotech industry influence on neuroscience
- brain abscess
- brain changes with age
- brain collections
- brain connectivity
- brain cyst
- brain effect on personality
- brain imaging
- brain injury
- brain physical shortfalls
- brain research projects
- brain shortfalls
- brain signal speed
- brain size and intelligence
- brain surgery
- brain tumors
- brain uploading
- brain waves
- calendar calculator
- CAMKII
- CBC theory
- chemical imbalance theory of mental illness
- citation errors
- citation of low-quality research
- claim of Jennifer Aniston cell
- claims of brain localization
- claims of chromatin involvement in memory
- claims of concept cells
- claims of concept-selective regions in the brain
- claims of epigenetic encoding of memory
- claims of mind reading by brain scans
- claims of neural correlates of love
- claims of neural correlates of memory activity
- claims of neural correlates of mental activity
- claims of neural representations
- claims that brains think
- clairvoyance
- conscious cells theory
- consciousness
- consciousness shadow-speaking
- corporate funding of neuroscientists
- COVID-19
- cryo-EM
- Darwinism

At the end of his book *More Astral Projections*, Robert Crookall has some interesting summary statistics regarding how often such accounts had recurring characteristics. He used the term "the double" for a kind of spirit body that was a double of the human body. For what he called "single-type cases" the statistics included the following:

- "The fact that, the newly-released 'double', often took up a horizontal position (usually not far above its physical counterpart), was noted in 50 natural and 7 enforced cases (i.e. 23.3 per cent and 18.9 per cent respectively)."
- The percentage of people reporting a "silver cord" or "shining cord" connecting the human body and a spirit body (or something like that) was "43 (20.0 per cent) natural cases, 6 (16.2 per cent) enforced cases."

On page 100 of Green's book, she reports a smaller incidence of such a "cord" effect. She reports that only about 30% of those having a single out-of-body experience felt any connection to their body, and that only 3.5% reported a visible connection to the body, such as a visible cord leading back to it.

The author of a 2023 PhD dissertation ("Investigating the Nature and Psychological Impact of Out-of-Body Experiences") performed an online survey of 213 people who claimed to have had an out-of-body experience (page 156). He states that 11% reported "seeing a ray of light, cord, ribbon, or rope connecting the nonphysical self to the physical self" (page 450).

Feature #6: an experience of encountering one or more spiritual or non-physical entities (or deceased people) while having an out-of-body experience.

I have already mentioned in this post several accounts which have this feature. Below are some more:

(1) On page 5 of a 1944 periodical (the May 10, 1944 *Psychic Observer* which can be read here) George B. Bronwell MD gives a narrative of a near-death experience and out-of-body experience. He reported seeing his wife's sister, who had passed away several years earlier. He also reported being transported to some mystical realm.

(2) A report of out-of-body experiences can be read in the 1936 book '*Twixt Earth and Heaven* by Annie Britain, which you can read here. On page 56 she states this:

"*I woke to find myself standing outside my body, gazing at the sleeping form in the chair. My cousin was by my side, a young man who had died some years before, and to whom I had been deeply attached."*

(3) Olivia Robertson reported having an out-of-body experience that included a "long, long tunnel" and an encounter with her deceased mother (link).

(4) Young Kanta Smith reported an out-of-body experience while "dead" for 15 minutes before being revived. She described meeting a grandfather she had never even seen in a photo, and a parent says the description matched that of the grandfather (link).

- default mode network
- dementia
- dendritic spines
- depression
- distributed recall hypothesis
- DNA
- dreams
- EEG studies
- eidetic memory
- emergence
- emergentism
- engram
- epigenetics
- epilepsy
- ESP
- evolution
- exceptional auditory memory
- exceptional mathematics ability
- exceptional memory
- exceptional multitasking
- exceptional musical memory
- exceptional reading ability
- exceptional recall of facts
- exceptional recall of number sequences
- exceptional recall of text sequences
- exceptional recognition memory
- exceptional speed of memorization
- exceptional speed of thinking
- exceptional time-related ability
- excessive and potentially hazardous brain scanning in neuroscience research
- extent of paranormal experience
- famous neuroscience case histories
- fastest memorizers
- feedback loops
- file drawer effect
- first rule of neural explanation
- fMRI
- free books by Mark Mahin
- free will
- free-exploratory neuroscience technique
- freezing behavior
- frontal lobes
- fusiform face area
- Gadolinium contrast agents
- gaslighting
- genes
- global workspace theory

(5) On page 67 of a book we read of a New Jersey woman who reported an out-of-body experience during an operation. She recalls meeting a deceased grandmother who took her on a little flying tour that ended with the woman returning to her body.

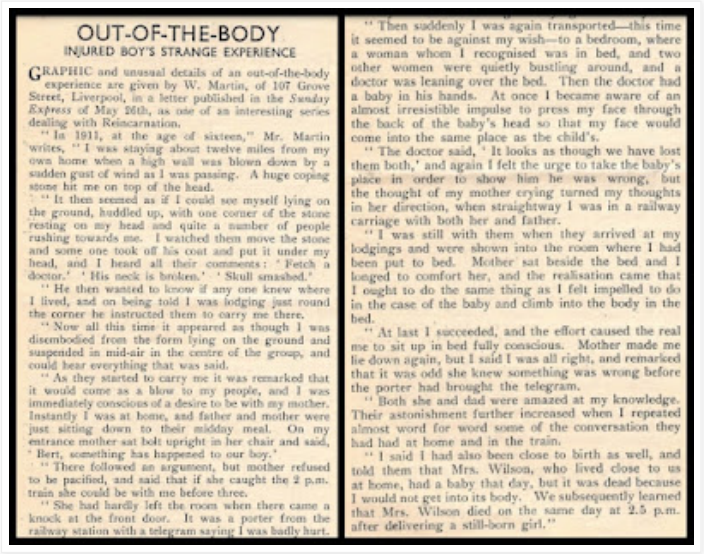
The author of a 2023 PhD dissertation ("Investigating the Nature and Psychological Impact of Out-of-Body Experiences") performed an online survey of 213 people who claimed to have had an out-of-body experience (page 156). He states that 25% reported "seeing spiritual entities or beings" (page 450), and that 42% reported "feeling the presence of an unknown non-physical being."

Feature #7: an experience of completely leaving the location of the body, while traveling to other earthly locations or unearthly locations.

I have already reported above several cases that reported Feature #7. Below are some more.

(1) Marcel Picard reported having an out-of-body experience in which he floated above his body, eventually reaching other apartments below his (link).

(2) Below is a May 20, 1935 account of a young boy's out-of-body experience, from page 342 of the periodical Light. The account includes a report of the observer transporting around mysteriously to other earthly locations.



OUT-OF-THE-BODY
INJURED BOY'S STRANGE EXPERIENCE

GRAPHIC and unusual details of an out-of-the-body experience are given by W. Martin, of 107 Grove Street, Liverpool, in a letter published in the *Sunday Express* of May 26th, as one of an interesting series dealing with Reincarnation.

"In 1911, at the age of sixteen," Mr. Martin writes, "I was staying about twelve miles from my own home when a high wall was blown down by a sudden gust of wind as I was passing. A huge coping stone hit me on top of the head.

"It then seemed as if I could see myself lying on the ground, huddled up, with one corner of the stone resting on my head and quite a number of people rushing towards me. I watched them move the stone and some one took off his coat and put it under my head, and I heard all their comments: 'Fetch a doctor.' 'His neck is broken.' 'Skull smashed.'

"He then wanted to know if any one knew where I lived, and on being told I was lodging just round the corner he instructed them to carry me there.

"Now all this time it appeared as though I was disembodied from the form lying on the ground and suspended in mid-air in the centre of the group, and could hear everything that was said.

"As they started to carry me it was remarked that it would come as a blow to my people, and I was immediately conscious of a desire to be with my mother. Instantly I was at home, and father and mother were just sitting down to their midday meal. On my entrance mother sat bolt upright in her chair and said, 'Bert, something has happened to our boy.'

"There followed an argument, but mother refused to be pacified, and said that if she caught the 2 p.m. train she could be with me before three.

"She had hardly left the room when there came a knock at the front door. It was a porter from the railway station with a telegram saying I was badly hurt.

"Then suddenly I was again transported—this time it seemed to be against my wish—to a bedroom, where a woman whom I recognised was in bed, and two other women were quietly bustling around, and a doctor was leaning over the bed. Then the doctor had a baby in his hands. At once I became aware of an almost irresistible impulse to press my face through the back of the baby's head so that my face would come into the same place as the child's.

"The doctor said, 'It looks as though we have lost them both,' and again I felt the urge to take the baby's place in order to show him he was wrong, but the thought of my mother crying turned my thoughts in her direction, when straightway I was in a railway carriage with both her and father.

"I was still with them when they arrived at my lodgings and were shown into the room where I had been put to bed. Mother sat beside the bed and I longed to comfort her, and the realisation came that I ought to do the same thing as I felt impelled to do in the case of the baby and climb into the body in the bed.

"At last I succeeded, and the effort caused the real me to sit up in bed fully conscious. Mother made me lie down again, but I said I was all right, and remarked that it was odd she knew something was wrong before the porter had brought the telegram.

"Both she and dad were amazed at my knowledge. Their astonishment further increased when I repeated almost word for word some of the conversation they had had at home and in the train.

"I said I had also been close to birth as well, and told them that Mrs. Wilson, who lived close to us at home, had a baby that day, but it was dead because I would not get into its body. We subsequently learned that Mrs. Wilson died on the same day at 2.5 p.m. after delivering a still-born girl."

(3) Below is an account of a man claiming to have out-of-body experiences in which he traveled to the 1905 World's Fair in St. Louis.

- gnostic cells
- groupthink
- health hazards in neuroscience experiments
- hemispherectomy
- high mental function despite large brain damage
- hippocampus
- how to detect bad neuroscience
- HSAM (Highly Superior Autobiographical Memory)
- Human Brain Project
- hydrocephalus
- hyperlexia
- hyperscanning
- hyperthymesia
- hypnosis
- idea creation
- idealism
- imagination
- inappropriate neuroscience prize awards
- informed consent
- instincts
- integrated information theory
- intelligence after brain injury
- intelligence of animals with small brains
- interbrain synchrony
- IQ increase after brain tissue removal
- IQ increase after hemispherectomy
- keep-torturing-the-data-until-it-confesses tactics
- lack of corpus callosum
- lack of neural correlates of thinking
- lack of progress in cognitive neuroscience
- life review
- longtermism
- loss of cerebellum
- loss of corpus callosum
- loss of frontal lobes
- loss of half of brain
- loss of left half of brain
- loss of most of brain
- loss of right half of brain
- loss of temporal lobe
- low connectivity of brains
- low statistical power in neuroscience experiments
- LTP
- M. Mahin autobiographical sketch
- materialism

Was Borne Through Space.

Remarkable Psychic Experience Had by Minister During Recovery From Illness.

(Los Angeles Examiner.)

DOES the human soul sometimes leave the human body and consciously exist apart from it, returning later to its temple of flesh, bringing the memory of its experiences.

Rev. F. J. Sulver, the well known Congregational minister of Pasadena, has had a remarkable psychic experience, which has caused him to give hours to this problem.

While his physical body lay asleep at his Pasadena home, the minister floated through space to the World's fair at St. Louis. He viewed the wonderful sights of this great exposition and floated back to his home, to awaken in the morning and relate to his family his experiences at the fair.

Night after night this happened, and while Mr. Culver tells of the remarkable happening he does not attempt to explain it. That he is puzzled he acknowledges, but, although he says it might have been a dream, his whole manner shows he hardly accepts such a solution.

Rev. F. J. Culver is well known in Pasadena. He is field secretary in the Congregational church, was a high official in the Y. M. C. A., and prior to his recent illness was engaged in reorganizing the West Side Congregational church, incidentally raising a fund of $6,000 to pay off a debt.

This hard work occasioned a breakdown and the psychic experience followed.

His illness confined him to his home, 670 South Grand avenue, Pasadena. For some time he was in bed and then gradually began to improve. It was during these convalescent days that he was apparently carried through space in a chair, taken about the fair grounds and returned home.

The average man is decidedly skeptical about all matters occult, but there are those who earnestly insist that such things do occur, and even attempt to explain the experience of Dr. Culver.

Rev. Mr. Culver relates his experience as follows:

"I had been laboring excessively for several weeks and was finally stricken down, being confined to my home. It was there I experienced this mystical visit to the fair. It may have been a dream. I don't attempt to explain it.

"I was started through space, from my own house over the miles of country between Pasadena and St. Louis, and placed in the fair grounds. I saw the buildings, saw the people and saw the exhibits.

"I had been planning to go to St. Louis, but my illness had prevented it.

"I could go about, see the exhibits and was greatly interested in many things that I saw. A man naturally shrinks from telling a story of this kind, but I tell this just as it seemed to happen to me. Had it just been one night I would have thought nothing of it, but happening night after night, I am forced to acknowledge there is something about it I cannot explain.

"Now, understand, I was not placed in a golden chariot, surrounded by angels. It was nothing like that.

"It was just an ordinary chair like you see on the porch. There was nothing extraordinary visible. I appeared to be my ordinary self, except that I certainly possessed mental powers aside from whatever else there may have been, far beyond anything of which I am capable.

You can read the full account here:

https://chroniclingamerica.loc.gov/lccn/sn85058130/1905-02-05/ed-1/seq-18/

(4) Below is a 1903 account of a dying boy (Walter Smith) who reports a trip to Heaven during a close brush with death that was soon followed by actual death. We have elements of a near-death experience, an out-of-body experience and perhaps what is called terminal lucidity. Click on the image to read it better.

- mechanistic biology
- memory after brain injury
- memory encoding
- memory maintenance
- memory recall
- memory storage
- mental focus
- mental illness
- methylation theory of memory storage
- microscopic analysis of brain tissue
- microtubules
- mind over matter
- mind uploading
- misleading visuals in brain imaging papers
- misstatements about neuroscience case histories
- molecular machinery
- morphogenesis
- Morris water maze
- multiple copies of a memory theory
- narrowness of neuroscientist studies
- natural selection
- near death experiences
- network neuroscience theory
- neural noise
- neuron nicknames
- neuroscience blogs
- neuroscience research endangering patients with brain problems
- neuroscientist confessions
- neuroscientist hand-waving
- neuroscientist pareidolia
- noise-mining
- non-local consciousness
- nonneuralism
- novelty preference technique
- opinion poll of neuroscientists
- optogenetics
- orchestrated objective reduction theory
- origin of biological complexity
- origin of man
- origin of Mind
- origin of minds
- out-of-body experiences
- overblown hype
- pain insensitivity
- panpsychism
- paranormal phenomena
- patient H.M.

MOST REMARKABLE PSYCHIC PHENOMENON

Walter Smith, of This City, After Apparently Dying Came Back to Life and Talked for Hours of Heaven.

You can read the account below:

https://cdnc.ucr.edu/?a=d&d=SRX19030814.2.2&srpos=752&e=-------en--20--741--txt-txTI-psychic-------

(5) A person being viciously beaten by the Nazis reportedly had an out-of-body experience in which he returned to his home, only to see his wife cavorting there with another man (link)

(6) A nurse claimed that three different times she had an out-of-body experience when one of her patients was dying, saying that she kind of mystically traveled with them towards some otherworldly destination, before being told she must go back (link).

(7) A student claiming out-of-body experiences reportedly described correctly the home of her professor, which she had never physically seen, but claimed to have visited in an out-of-body experience (link).

In the very interesting 1907 book *The Psychic Riddle* by Isaac Funk (the same Funk of the famous Funk and Wagnall's dictionary), we read an account on pages 179 to 184 by a person who Funk tells is a " well-known gentleman in

- patient K.C.
- pharmaceutical industry influence on neuroscience
- philosophy
- philosophy of biology
- philosophy of mind
- Phineas Gage
- photographic memory
- physical shortfalls of all brains
- physicalism
- PKMZ
- PKMzeta
- place cells
- post-hypnotic amnesia
- pre-1975 near-death experience
- pre-1975 out-of-body experience
- precognition
- predicting intelligence from brains
- predicting psychology from brains
- predictions
- prefrontal cortex
- preservation of learned knowledge after hemispherectomy
- preservation of learned knowledge after loss of much of brain
- preservation of learned knowledge in animals after brain tissue loss
- protein turnover
- psychiatric mudslinging
- psychiatry
- psychical research
- quantum mechanics
- questionable research practices
- recall of 50-year-old memories
- recall of long texts
- recommended books
- redundant memory storage
- relative ease of getting a neuroscience PhD
- reliable techniques for measuring recall in rodents
- remote viewing
- replication crisis
- research abuse of epileptics
- savants
- science academia resemblance to organized religion
- science journalism
- scientific consensus
- scientific fraud
- scientist misconduct
- sequential traversal of neurons

New York, a man whose veracity would be questioned by no one who knows him, a physician of standing, also an editor and publisher of reputation." We read this account of an out-of-body experience involving travel to a distant location:

"As the movement continued upward, all at once there came a flashing of lights in my eyes and a ringing in my ears, and it seemed for an instant as tho I had become unconscious. When I came out of this state, I seemed to be walking in the air. No words can describe the exhilaration and freedom that I experienced. No words can describe the clearness of mental vision. At no time in my life had my mind been so clear or so free. Just then I thought of a friend who was more than a thousand miles distant. Then I seemed to be traveling with great rapidity through the atmosphere about me. Everything was light, and yet it was not the light of the day or the sun, but, I might say, a peculiar light of its own, such as I had never known. It could not have been a minute after I thought of my friend before I was conscious of standing in a room where the gas-jets were turned up, and my friend was standing with his back toward me, but suddenly turning and seeing me, said, 'What in the world are you doing here? I thought you were in Florida,' and he started to come toward me. While I heard the words distinctly, I was unable to answer. An instant later I was gone, and the consciousness of the things that transpired that memorable night will never be forgotten. I seemed to leave the earth, and everything pertaining to it, and enter a condition of life of which it is absolutely impossible to give here any thought I had concerning it, because there was no correspondence to anything I had ever seen or heard or known of in any way. The wonder and the joy of it was unspeakable, and I can readily understand now what Paul meant when he said, 'I knew a man, whether in the body or out of it I know not, who was caught up to the third heaven, and there saw things which it is not possible (lawful) to utter.'...I may add here that the friend referred to having been seen by me that night was also distinctly conscious of my presence and made the exclamation mentioned. We both wrote the next day and relating the experiences of the night, and the letters corroborating the incident crossed in the post....If the whole world was to rise up and say that there was no life after one left the physical organism, it would not make one particle of difference in my mind, as I am absolutely certain that I have been as free from my physical body as I ever will be, and that my life apart from it was far more wonderful than any life I have ever experienced in it."

A year 2025 study ("Out-of-body experiences: interpretations through the eyes of those who live them") gives us two cases similar to those above. We read, "Participants 5 and 10 reported traveling to very distant places, such as other cities or countries."

The author of a 2023 PhD dissertation ("Investigating the Nature and Psychological Impact of Out-of-Body Experiences") performed an online survey of 213 people who claimed to have had an out-of-body experience (page 156). He states that 56% reported they "travelled to a different room or location away from the physical body " (page 449).

In the paper "The Near-Death Experience Content (NDE-C) scale: Development and psychometric validation" we get some good data from a survey of 403 people who claimed to have had a near-death experience. There is a scale mentioning features of near-death experiences, in which people can give a number between 0 and 4, with 0 meaning "not at all, none," 1 meaning

- sharp wave ripples
- short lifetime of synapses
- short lifetimes of brain protein molecules
- short lifetimes of dendritic spines
- simulation hypothesis
- so-called psychiatric brain surgery
- sociology of science
- source of thoughts
- speed of human minds
- speed reading
- Spiritualism
- split-brain operation
- stem cells
- strokes
- synapse theory of memory
- synapses
- synaptic mapping
- synaptic plasticity
- synaptic turnover
- T-maze
- teleospiritism
- telomeres
- terminal lucidity
- top-down theory of mind
- transhumanism
- transposition of senses
- traumatic brain injury
- unnecessary brain scans
- unreliability of synaptic transmission
- unreliable neuroscience techniques
- vaccines
- videos
- visual recognition
- Y-mazes

"slightly," 2 meaning "moderately," 3 meaning "strongly" and 4 meaning "extremely, more than any other time in my life, and stronger than 3."

- 62% give the "extremely" answer (4) for "you had the impression of being outside of, or separated from your own body."
- 58% give the "extremely" answer (4) for "you had the sensation of leaving the earthly world or of entering a new dimension and/or environment."

Feature #8: an out-of-body experience experience that includes observations of things that should have been impossible for a person to observe, giving his physical position.

A patient who had an out-of-body experience during a dental operation reported seeing two pennies on top of a high shelf while the patient floated above her body. The dentist got a ladder, and found that the two pennies were really there (link).

Many people have heard of one or two of these veridical near-death experiences, perhaps the Pam Reynolds case or the often-told story about "Maria's shoe." But judging from the book *The Self Does Not Die: Verified Paranormal Phenomena from Near-Death Experiences,* these veridical near-death experiences may not be so rare. Below are some of the cases documented in that book.

Case 2.1: A dying cancer patient remarked to Ricardo Ojeda-Vera (a doctor's assistant) that he had written a beautiful letter to his mother. Ojeda-Vera had written such a letter. The patient "described in detail exactly what he had written," and accurately recounted that he had worn a green bathrobe while writing the letter. The patient claimed to have seen Ojeda-Vera writing the letter while she had "looked down on him from the ceiling." Three days later the patient died.

Case 2.2: A patient reported having an out-of-body experience (OBE) during a cardiac arrest, and reported seeing a penny on the top of a cabinet. The cabinet was checked, and a penny was found there.

Case 2.3: In this well-known case, a woman named Maria reported floating out of her body during a cardiac arrest, and that during such an experience she saw a dark blue tennis shoe on a ledge near a window on the third floor. A search found such a shoe in such a location.

Case 2.5: At a hospital a woman who had a cardiac arrest reported having an out-of-body experience during which she floated out of her body, and saw a 12-digit serial number on the top of a six-foot tall respirator. The respirator was later checked and found to have exactly that number on its top.

Case 2.6: A man reported having an out-of-body experience during which he observed a 1985 quarter atop an 8-foot-high cardiac monitor. The top of the monitor was checked, and a 1985 quarter was found on its top.

Case 2.8: A man reported having an out-of-body experience during which he observed medical workers putting defibrillation paddles on him and gel. This matched his actual medical experience during his cardiac resuscitation.

Case 2.11: a woman reported floating out of her body during a cardiac arrest, and that during such an experience she rose up through the hospital's floors, rising up above the roof, where she saw the skyline and a red shoe. A search of the hospital's roof found a red shoe on the roof.

Case 2.12: A man reported that during his cardiac operation he floated out of his body and returned to his home, where he saw a caretaker having sex there with his girlfriend. The caretaker admitted this had happened.

Case 2.13: A woman reported that during her operation she floated out of her body and saw doctors telling her family (incorrectly) that she had died. It was later confirmed that the family had been told that.

Case 2.14: A woman reported having a near-death experience in which she looked down at her body from a corner of a hospital room during her operation. She then reported seeing in a paranormal way two of her grandmothers saying in a cafeteria that they were going to have a cigarette, even though neither smoked. It was confirmed that this improbable thing had happened.

Case 2.15: A patient in the intensive care unit of the hospital had a near-death experience in which he was reportedly able to hear the conversations of relatives elsewhere in the hospital, such as a waiting room conversation about a green toy tractor knocking down a wall of toy bricks. The conversations had occurred far away from his location in the hospital.

Case 3.1: A woman put under general anesthesia during her operation reported details of her operations from an “on the ceiling” perspective, and also correctly reported details of an operation in the adjacent operating room, such as the amputation of a leg and its placement in a yellow bag. She made the report as soon as she woke up, and had no way of knowing such information.

Case 3.7: A man missing his dentures correctly reported a nurse putting them in the drawer of a cart during his cardiac resuscitation, when he should have been completely unconscious.

Case 3.8 A man reported a near-death experience during cardiac arrest. He reported that during the medical efforts to revive him, he saw that a nurse dropped a tray and was scolded about it by a doctor. The account was confirmed.

Case 3.9 A woman had a near-death experience during cardiac arrest. She reported hovering in a corner of the room near the ceiling, and noticed a rose-shaped hair clip and a bottle breaking, details she should have been unaware of. The details were accurate.

Case 3.10 A patient unconscious during his operation reported floating above his body, and accurately described details of his operation.

Case 3.11 This dramatic near-death experience account is told in the youtube.com interview here. A patient was written off for dead, and had no vital signs for "close to 20 minutes." During that time he had "no heart beat, no blood pressure, no respiratory function." But then in a seemingly miraculous manner the patient's vital signs reappeared, and he eventually "recovered

fully." The patient described a near-death experience in which he observed post-it notes in the operating room that he should have been unable to observe because his eyes were taped and he was unconscious. The details were accurate.

Case 3.12 A patient whose heart was stopped reported a near-death experience in which he heard some paramedic say something to the effect that the patient would never revive, but a rookie paramedic could use the patient to practice CPR. After undergoing an amazing recovery, the patient told what he had heard to one of the paramedics, who was amazed that the man had apparently heard what the paramedic had said.

Case 3.16 Medical staff tried to save a patient who had undergone cardiac arrest, and they decided to stop the resuscitation efforts. They later found a faint pulse, and resumed the revival efforts. The man survived, and described the medical efforts trying to revive him. He “got all the details right, which was impossible” because he had no pulse during such efforts.

Case 3.18 A man who had a cardiac arrest during an operation reported to his doctor that he had seen a brown leather key fob fall out of the doctor's pocket during the operation. The doctor confirmed that such a thing had happened, at a time when the patient should have been unconscious.

Case 3.29: This case is the famous Pam Reynolds case, which I discuss here (while also discussing an equally astonishing case more recent). While having her senses blocked and her temperature dramatically lowered during an operation that should have guaranteed unconsciousness, Reynolds reported a near-death that included very specific details of her operation she should have been unaware of.

Case 3.30: A boy who underwent cardiac arrest recalled that during the medical efforts to revive him he "had been up in a corner of the room and had looked down on his body." He correctly recalled several details of the procedure.

Case 3.33: A man who underwent cardiac arrest reported an out-of-body experience in which he felt himself "rising up through the ceiling" and then seeing some hospital area in which there were mannequins. Above the ICU he was in was a CPR training area in which there were dummies (resembling mannequins) used for CPR training.

Sylvan Muldoon claimed to have willfully experienced many out-of-body experiences, at a time when the term was little-known. In his 1929 book *The Projection of the Astral Body*, Sylvan Muldoon uses the phrase "in the astral" to mean "while having an out-of-body experience." He states this:

"*You have asked me, too, if I have ever seen anything while in the astral which I did not know existed, and later verified by seeing it in the physical. Certainly ! This is nothing unusual to do, while consciously projected. I have often gone into houses, and noted the things — later going there in the physical, and seeing everything exactly as I saw it in the astral."*

A year 2025 study ("Out-of-body experiences: interpretations through the eyes of those who live them") gives us two cases similar to those above. We read

this:

"Participant 5 described an out-of-body experience where she visited the hospital to see her aunt in the Intensive Care Unit (ICU). The following day, upon visiting the hospital in reality, she was deeply surprised to find that the hallway, the door, and the ICU where her aunt was located were exactly as she had seen during the OBE. Participant 10 reported that during her OBE, she visited a village in Scotland. As she flew in, she observed a bridge and a specific landscape, and upon 'landing' in the village, she noticed the village's name. Later, she confirmed on a map that both the river and the village existed."

Feature #9: an experience of having an exalted intellect or speeded-up mind during an out-of-body experience

On page 81 of Green's book, she states**,** "Subjects usually report that their intellectual faculties were unimpaired in the ecsomatic [out-of-body] state; indeed, their reports often suggest a greater than usual degree of mental clarity, and some subjects assert explicitly that their intellectual functions often improved in the ecsomatic [out-of-body] state." On page 69 of Green's book we read an account by someone who says his intelligence seemed sharper during his out-of-body experience.

On page 71 of the 1918 book *Man Is a Spirit* by J. Arthur Hill (a very interesting collection of spontaneous paranormal experiences) we have an account by John Huntley of an out-of-body experience, an account in which he claims to have a greatly enhanced mind during his out-of-body experience:

"About five years ago I woke from sleep to find 'myself' clean out of the body, as the kernel of a nut comes out of its shell. I was conscious in two places — in a feeble degree, in the body which was lying in bed on its left side; and to a far greater degree, away from the body (far away, it seemed), surrounded by white opaque light, and in a state of absolute happiness and security (a curious expression, but one which best conveys the feeling). The whole of my personality lay 'out there,' even to the replica of the body — which, like the body, lay also on its left side. I was not conscious of leaving the body, but woke up out of it. ***It was not a dream, for the consciousness was an enhanced one, as superior to the ordinary waking state as that is to the dream state."***

In 1983 Bruce Greyson MD created a 16-item Greyson Scale questionnaire listing features often reported in near-death experiences. The scale is used to judge whether an experience should be classified as a near-death experience, with people reporting 7 or more of its items being classified as having had a near-death experience. Because reports of speeded-up thinking were fairly common in near-death experiences, one of the 16 items on the 16-item Greyson Scale questionnaire is a question asking, "Were your thoughts speeded up?" In the 1983 paper that introduced the Greyson Scale, Greyson reported data on 74 people who reported something like a near-death experience. Of those, 53% reported an out-of-body experience, 46% reported "thoughts unusually vivid," 30% reported "sudden understanding," 23% reported extrasensory perception, and 19% reported "thinking unusually fast." 0% reported "thinking blurred or dull." Near-death experiences often include a "life review" experience, with 22% of the 74 in Greyson's paper reporting such a thing. During such a life review experience, thinking or mental experience is

typically reported as occurring super-fast, with people describing the life review by saying things such as "my whole life flashed before me in an instant."

In a 2014 paper about near-death experiences, which often involve out-of-body experiences, the author states this about near-death experiences (NDE):

"The NDERF survey asked, 'How did your highest level of consciousness and alertness during the experience compare to your normal, everyday consciousness and alertness?' Of 1,122 NDErs surveyed, 835 (74.4%) indicated they had 'More consciousness and alertness than normal'; 229 (20.4%) experienced 'Normal consciousness and alertness'; and only 58 (5.2%) had 'Less consciousness and alertness than normal.'

In table 2 of the 2003 paper here, 44% of 27 people having near-death experiences reported "accelerated thought processes" and 70% reported a "sense of being out of the physical body."

A very long post related to this long post is my post "Prevailing Brain Dogmas Cannot Explain Hypnotic Phenomena" which you can read here. In that post I describe 13 phenomena reported during hypnosis, none of which are explicable under prevailing dogmas about the brain. Item #10 in that list was "Exaltation of thinking and speaking abilities under hypnosis." I quote cases of people who seemed to think much faster and much better under hypnosis than in normal consciousness. Although not involving out-of-body experiences, such cases tend to lend credence to reports that the mind can be sped up during an out-of-body experience.

The author of a 2023 PhD dissertation ("Investigating the Nature and Psychological Impact of Out-of-Body Experiences") performed an online survey of 213 people who claimed to have had an out-of-body experience (page 156). He states that 40% reported "a feeling of an expansion of their consciousness or non-physical body to a larger than normal size" (page 451), and that 35% reported "a feeling of all knowing or understanding" (page 451).

In the paper "The Near-Death Experience Content (NDE-C) scale: Development and psychometric validation" we get some good data from a survey of 403 people who claimed to have had a near-death experience. There is a scale mentioning features of near-death experiences, in which people can give a number between 0 and 4, with 0 meaning "not at all, none," 1 meaning "slightly," 2 meaning "moderately," 3 meaning "strongly" and 4 meaning "extremely, more than any other time in my life, and stronger than 3."

- 62% give the "extremely" answer (4) for "you had the impression of being outside of, or separated from your own body."
- 35% give the "extremely" answer (4) for "your thoughts speeded up."

Feature #10: an ability to mentally move around by merely willing it.

On page 86 of Green's book she says that some people having out-of-body experiences report the ability to change their viewing position by merely willing it. She quotes one person as saying, "I experimented by moving about my room with a kind of floating or
drifting movement, some feet above the ground, and learned that
direction was quite easily controlled by will."

On page 691 of the research paper here, we read of a person reporting many out-of-body experiences. We read that "he reported that every time his Self separated from his physical body, it was able to inspect different remote places including settings which didn't seem to be of Earthly origin. Moreover, he was able to do so at the speed of thought and independently of distance involved between his physical body and the place his Self tried to reach."

On page 260 of George H. Hepworth's 1895 account of an out-of-body experience, which begins here, he seems to report moving great distances by an act of will or desire:

"The most intense desire to see her seized me. It was a longing so poignant, so sharp, that it was painful. This ardor seemed to be an impelling force, and I new with incredible speed through the darkness. The camp, the lake, the mountains, were lost to view almost instantly, while other mountains and lakes came within range of my astonished vision."

Recalling an out-of-body experience, a Mr. Brown states this:

"I became conscious to find myself apparently floating over my Physical Body at a height of five to six feet...I willed myself to move forward in the air, in a horizontal position, feet first until I was quite clear of the house."

Feature #11: an experience of seeming to re-enter the body after having been separated from it.

(1) On pages 57-58 of an Italian book (the text of which can be easily translated using Google Translate), we read that Mrs. Nathalie Annenkof reported an out-of-body experience, and said this about the end of an out-of-body experience:

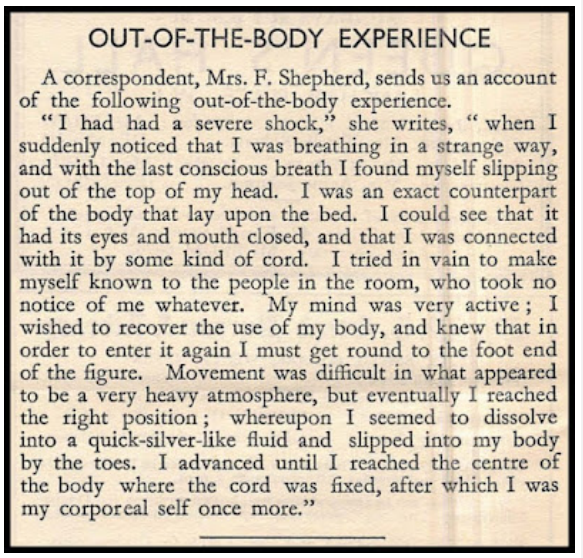
"*I approached my lying body and tried to enter it. I immediately felt that it absorbed me, like a sheet of blotting paper, or like a sponge absorbs water."*

(2) A report of out-of-body experiences can be read in the 1936 book '*Twixt Earth and Heaven* by Annie Britain, which you can read here. On page 53 she states this:

"*I should mention in passing that I am seldom conscious of leaving the body. I simply find myself standing beside my sleeping form. The sensation on returning is always distinct; it is a sort of shock-the kind · of physical shock one experiences when one wakes from sleep with a start. How I really enter I cannot explain; we seem to fuse into each other with a sort of snap."*

(3) German government official Annamarie Renger reported leaving her body, and said that when she returned, it was like passing through a small tube (link).

(4) The account below is from page 62 of the January 26, 1934 edition of the periodical *Light*, which you can read here. We read of someone re-entering his body after an out-of-body experience, saying, "I seemed to dissolve into a quick-silver-like fluid and slipped into my body by the toes":



OUT-OF-THE-BODY EXPERIENCE

A correspondent, Mrs. F. Shepherd, sends us an account of the following out-of-the-body experience.

"I had had a severe shock," she writes, "when I suddenly noticed that I was breathing in a strange way, and with the last conscious breath I found myself slipping out of the top of my head. I was an exact counterpart of the body that lay upon the bed. I could see that it had its eyes and mouth closed, and that I was connected with it by some kind of cord. I tried in vain to make myself known to the people in the room, who took no notice of me whatever. My mind was very active; I wished to recover the use of my body, and knew that in order to enter it again I must get round to the foot end of the figure. Movement was difficult in what appeared to be a very heavy atmosphere, but eventually I reached the right position; whereupon I seemed to dissolve into a quick-silver-like fluid and slipped into my body by the toes. I advanced until I reached the centre of the body where the cord was fixed, after which I was my corporeal self once more."

On page 18 of the study here, we have some comments by four people reporting out-of-body experiences:

- "Getting back into my physical body was like a gentle lowering of my dissociated self into my body except for the back of my head which felt like it wouldn't go back in, but as I persisted it suddenly went back in with a sort of thud."
- "It felt like my dissociated self slammed back into my body."
- "I returned to my body as though I was abruptly falling from a certain height."
- "The return ....felt like a suction, or that I was shot back into my physical body in one quick motion."

Table 7 of the same paper (on page 16) tells us that 50+ people reported that at the end of their out-of-body experience they "felt a sensation of movement toward and/or reintegrating with the physical body." At the 55 minute mark in the interview here, aerospace executive Robert Bigelow states he heard an account from a person in the US air force who had an out-of-body experience after being in a centrifuge machine designed to test the high accelerations during space flight. According to Bigelow, the man found himself out of his body, observed it from outside, passed through a solid wall, and eventually experienced a kind of slamming back into his human body.

Hallucinations produce random output, and when you get reports that follow an extremely characteristic pattern, then hallucination is not a credible explanation. Did all four people in your house report seeing at different times a man with a red hat and a green cape walking by your house? Then you could not have all been hallucinating this.

The similarities in out-of-body experiences are far too great to be explained by any hypothesis of hallucination. We have too much of a repetition of extremely distinctive features to be explained under any theory of hallucination. The probability of random hallucinations producing so many out-of-body experience accounts so similar seems as small as the probability that many people all over the world in many different countries would all report (purely because of coincidentally similar random hallucinations) that they all saw a pink elephant smoking a cigar.

There is no substance in any neuroscientist attempt to explain out-of-body experiences or near-death experiences. The attempts that have been made by neuroscientists to explain such phenomena have been largely characterized by dishonesty, misstatements and irrelevance. For a critical discussion of some of the attempts that have been made, see my post "There Is No Evidence of a Neural Explanation for Out-of-Body Experiences" which you can read here, and my post "Misleading Claims in Attempts to Naturally Explain Near-Death Experiences and Out-of-Body Experiences," which you can read here, and also my post "The Guardian's Misleading Story on Near-Death Experiences" which you can read here.

After making a very thorough study of reports of out-of-body experiences, an objective scholar will be led to the conclusion that they are among the most decisive items of evidence against the claim that the mind is a product of the brain. Along with brain physical shortfalls that show your brain cannot be the cause of the main ordinary aspects of human mentality, out-of-body experiences prove that you are a soul, not a brain.

at January 09, 2025 No comments:

Labels: near death experiences, out-of-body experiences, paranormal phenomena, pre-1975 near-death experience, pre-1975 out-of-body experience

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Tuesday, May 21, 2024

How High-Speed Life Reviews in Near-Death Experiences Discredit "Brains Make Minds" Claims and "Brains Store Memories" Claims

Many people recognize that reports of near-death experiences tend to contradict materialist claims about the mind and the brain, such as the claim that the mind is merely the product of the brain and that memories are stored in brains. But I think that few realize just how thoroughly such experiences contradict such claims. As I discussed in my previous post, there are several facets of near-death experiences that discredit claims that brains make minds and claims that memories are stored in brains. In this post I will consider only one of these: the experience of high-speed life reviews.

A common characteristic of near-death experiences are so-called life review events in which someone may recall the events of life in very rapid succession and great vividness. Claims that such life-review events occur in near-death experiences go back more than a hundred years before Raymond Moody's 1975 book *Life After Life*. For example, on page 267 of the June 4, 1875 edition of *The Spiritualist*, we have a first-hand account of such an experience, told by William Stainton Moses. He states this, describing a life-review during a near-drowning:

"It never occurred to anybody, I suppose, that a man who could venture in a little cockleshell such as I was sculling, was unable to swim ; and so no particular effort was made to rescue me. I went down dazed and confused with the upset, and the shouts and objurgations of the crowd. I remember the shout of the coxswain, more forcible than polite, and then I floundered about until I suppose I became unconscious. At any rate a strange peacefulness took the place of my previous feeling. I recognised fully that I was drowning, but no sort of fear was present to my mind. I did not even regret the fact. ***By degrees, as it seemed—though the process must have been instantaneous—I recollected my life.*** *The link was—well, I am drowning, and this life is done with. It has not been a very long one. . . . And so the events of it came before my mind, and seemed to shape themselves in outline and move before me. It was not that I thought, but that* ***objective pictures of events seemed to float before me, a moving tableau****, as though depicted on the mass of water that weighed upon my eyes. I seemed to see the tableau, but not with the eye of sense: with that mysterious inner vision with which I have since discerned spiritual things. The silky, velvety appearance of the tableau, which seemed as I say to float before me, was very prominently impressed upon me.* ***The events were all scenes in which I had been an actor, and no very trivial or***

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unimportant ones were depicted, though they were not all serious, some indeed laughable enough. *Nor was my frame of mind particularly solemn. I was an interested spectator ; little more. One incident of which I had no previous knowledge was recalled to my mind on that occasion, and has never again left it. My memory of it is now as clear as of other things. The next thing I remember was the interruption of this peaceful state by a series of most unpleasant sensations which were attendant on resuscitation."*

Similarly, on page 410 of the 1870's book *The Marvellous Country* by Samuel Woodworth Cozzens, we have an account of a near-death experience occurring when the author fell from a high height:

"All this time I was acquiring greater momentum, until it seemed as though I was fairly flying into the very arms of the horrible death which stood staring me so steadily in the face. Not a bush or shrub could I see growing upon the precipitous sides; there was nothing, absolutely nothing, for me to cling to, and the stones and earth which I disturbed in my descent were falling in a shower around me.

Convinced that death was inevitable, I became perfectly reconciled to the thought. ***My mind comprehended in a moment the acts of a life-time. Transactions of the most trivial character, circumstances the remembrance of which had been buried deep in memory's vault for years, stood before me in bold relief; my mind recalled with the rapidity of lightning, and_yet retained a distinct impression of every thought.***

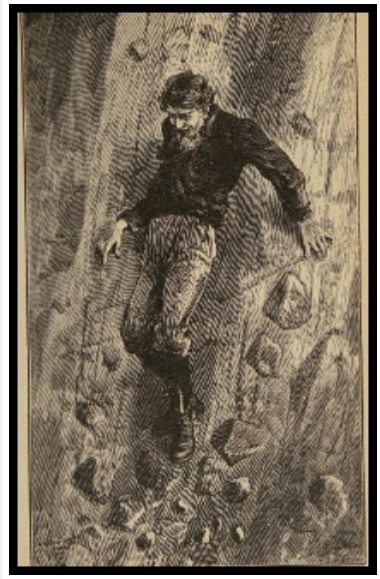
I seemed to be gliding swiftly and surely out of the world, but felt no fear, experienced no regret at the thought; on the contrary, rejoiced that I was so soon to see with my own eyes the great mystery concealed behind the veil; that I was to cross the deep waters and be at rest.

I thought I heard the sound of many voices, in wonderful harmony, coming from the far-off distance, though from what direction I could not tell.

My momentum had become so great that I seemed to experience much difficulty in breathing; and I remember that I was trying to explain to my own satisfaction why this should be so, when the heel of my right boot struck the corner of a small stone that chanced to be firmly imbedded in the earth and therefore offered so much resistance to my descent, that upon striking it I was thrown forward upon my face. This stone without doubt saved my life."

The book includes this illustration of what happened:

- A Soul Might Explain Instincts, but DNA and Brains Cannot
- Five Hallmarks of an Information Storage System (None of Which Your Synapses Have)
- Your Physical Structure Did Not Arise Bottom-Up, So Why Think Your Mind Did?
- Why a "Mechanical Memory" Theory Does Not Work
- The Brain Seems to Have No Mechanism for Reading or Writing Memories
- No One Understands How a Brain Could Generate Ideas
- Prevailing Brain Dogmas Cannot Explain Hypnotic Phenomena
- 30 Reasons for Rejecting the Theory of Neural Memory Storage
- Common Experiences That Show the Untruth of Professorial Memory Claims
- Neuroscience Research Customs Guarantee an Abundance of Junk Science
- Groupthink and Peer Pressure Make It Taboo for Neuroscientists to Put Two and Two Together
- The Social Construction of Eager Community Mirages
- Preprint Server Counts Suggest Engrams Are Not Really Science
- Engrams Are Touted Like Phlogiston Was Once Touted
- Synaptic Delays Mean Brain Signals Must Move at a Snail's Pace
- Raven Smarts Defy Prevailing Brain Dogmas
- No One Can Credibly Explain Why a Brain Would Store a Memory in One Specific Spot
- Brain Dogmas Versus Case Histories That Refute Them
- Inaccurate Titles and Misleading Citations Are Common in Science Papers
- In Neuroscience Papers Bluffing Is More Common Than Candor
- Young Age of Languages Contradicts Claims of Neural Storage of Linguistic Information
- Vacillating Disarray of the Memory Trace Theorists
- Study Finds "Poor Overall Reliability" of Brain Scanning Studies
- "Brains Store Memories" Dogma Versus the Reality of Noisy Brains
- The Brain Has Nothing Like 7 Things a Computer Uses to Store and Retrieve Information



In 1892 Albert Heim produced a paper in German entitled "Notizen über den Tod durch Absturz," which can be translated as "The Experience of Dying from Falls" or "Notes About Death from Falling." The original German text of the paper can be read here. Below is a translation I got using Google Translate. First Heim notes how he got his accounts of people who had close brushes with death after falling:

"*In mountaineering and other literature we come across relevant stories here and there, although rarely. In the Hamburg Laza-rethen in the war year 1870, as well as on various later occasions, I interviewed war wounded. Several doctors who had a lot of contact with victims were able to tell me about their statements. I researched several bricklayers and roofers who had fallen from scaffolding and roofs, half-injured workers in mines, on railway lines, etc. A large number ...who fell without losing their lives were able to give me precise information. Those who were thrown away by the air strike during the Elm landslide and became unconscious told me their experiences. I also received detailed reports from some club members who had crashed and were rescued, from three fellow professionals, etc. A fisherman who had been swept deep under water when the Zug bank collapsed told me his experiences. We have some good accounts of the Mönchenstein railway accident from those who narrowly escaped with their lives, e.g. from a locomotive driver, from some passengers, etc. etc. But what has caused me not to miss an opportunity to write such notes for more than 25 years collect, were my own experiences."*

Then Heim notes a remarkable similarity in the accounts:

"*For the vast majority of those who have had an accident - probably 95% - regardless of their level of education, the symptoms are exactly the same, only experienced slightly differently in degree. In the face of death due to a sudden accident, almost everyone experiences the same mental state - a completely different state than in the face of a less sudden cause of death. It can be briefly characterized as follows:*

No pain is felt, nor is there any paralyzing shock that can occur in the event of minor danger (fire outbreak, etc.). ***No fear, no trace of despair, no pain,***

- Exhibit A Suggesting Scientists Don't Understand How a Brain Could Store a Memory
- The Dubious Dogma That Brains Make Decisions
- Long Article Tries to Show Neural Memory Storage, but Gives No Real Evidence for It
- How Evidence for ESP Undermines the "Minds Come From Brains" Dogma
- Gender Differences in Brains Help Discredit Prevailing Dogmas About Brains
- Study Finds Equal Brain Connectivity in All Mammals
- Some Reasons the Main Theory of Neural Memory Storage Is Unbelievable
- Scientists Can't Persuasively Explain How a Brain Could Instantly Retrieve a Memory
- The Lack of Evidence for Memory-Storage Engram Cells
- Candid Confessions of the Cognition Experts
- Global Workspace Theory Sure Isn't an Explanation for Consciousness
- When Animals Cast Doubt on Dogmas About Brains
- Memories Can Form Many Times Faster Than the Speed of Synapse Strengthening
- The Guy with the Smallest Brain Had the Highest IQ
- He Had Half a Brain and Above Normal Intelligence
- The Truth About Neurons and Synapses
- A Diagram of Explanatory Dysfunction in Academia
- The Brain Shows No Sign of Working Harder During Thinking or Recall
- More Evidence of High Mental Function Despite Large Brain Damage
- The Lack of a Viable Theory of Neural Memory Encoding
- More Evidence That Neuron Loss Has Little Effect on Cognition
- Fraud and Misconduct Are Not Very Rare in Biology
- Reasons for Doubting Thought Comes from the Frontal Lobes or Prefrontal Cortex
- Why Most Animal Memory Experiments Tell Us Nothing About Human Memory
- Other Evidence of Human Paranormal Abilities

rather calm seriousness, deep resignation, commanding spiritual security and speed. The activity of thought is enormous, increased to a hundredfold speed or intensity, the conditions and the eventualities of the outcome are objectively clearly seen far away, no confusion occurs. The time seems very extended. You act quickly and think carefully. In many cases this is followed by a sudden look back into one's entire past. Finally, the faller often hears beautiful music and then falls into a wonderful blue sky with little rose-colored clouds. *Then consciousness disappears painlessly - usually at the moment of awakening, which is only heard and never painfully felt. Of the senses, hearing is probably the last to disappear."*

Heim discusses a strange increase in the speed of thought:

"Anxiety paralysis does not occur, thought activity appears to be enormously increased, and time is lengthened in the same proportion. The judgment remains clearly objective, and as far as the external circumstances allow it, the person who falls remains able to act at lightning speed."

Heim quotes a first-hand account by one person who nearly died in a terrifying fall:

"Meanwhile, a whole flood of thoughts had time to move through the brain in a clear way: The next blow will bring you a grim death, it was said. ***A series of pictures showed me in quick succession all the beauty and love that I had experienced in this world****, and in between them the sermon that I had heard from Mr. Obersthelfer that morning sounded like a powerful melody: God is almighty, heaven and earth rest his hand; We must remain silent about his will. Infinite calm came over me at this thought, in the midst of all the terrible turmoil. The car was thrown up twice more; then the front part suddenly drove vertically down into the Birs, and the rear part with me was thrown sideways over the embankment down into the Birs. The wagon was shattered."*

Heim gives this first-hand account of a fall he experienced, noting that his thought seemed greatly speeded-up:

"Then ***I saw, as if on a stage from a distance, my entire past life played out in numerous images****. I saw myself as the main character playing. Everything was as if transfigured of a heavenly light and everything was beautiful and without pain, without fear, without torment.* ***The memory of very sad experiences was also clear,*** *but still not sad. No fighting or strife, the fight had also become love. Sublime and reconciling thoughts dominated and connected the individual images, and a divine calm passed through my soul like wonderful music. More and more a wonderfully blue sky surrounded me with little rosy and especially delicate violet clouds - I floated out into it without any pain and gently, while I saw that I was now flying freely through the air and that there was still a field of snow below me. Objective observation, thinking and subjective feeling occurred simultaneously side by side. Then I heard my thud and my fall was over."*

Below is a similar account from the 2023 paper "Near-death experiences and the change of worldview in survivors of sudden cardiac arrest: A phenomenological and hermeneutical study ":

- Why Brains Are Not Suitable for Storing Long Sequences Like Humans Remember
- Why Brain Scans Don't Show Brains Make Minds
- Why Strokes, Alzheimer's Disease and Drunkenness Don't Prove the “Brains Make Minds” Dogma
- Synaptic Density Studies Contradict the Most Popular Memory Theory
- The Rare "Total Recall" Effect That Conflicts with Brain Dogmas
- Physical Connections Do Nothing to Explain Cognition
- The Sociological Reasons Why Bad Explanations Persist in Academia
- Split-Brain Cases Conflict with "Brains Make Minds" Dogma
- Why So Much of Neuroscience News Is Unreliable
- An Analogy Clarifying Why the "Brain Stores All Your Memories" Dogma Is Untenable
- Why Darwinism Fails to Explain the Human Mind
- What Is It That a Brain Does?
- Cloud Computing and a Non-Local Model of Consciousness
- Why We Do Not Understand the Origin of Complex Biological Innovations
- Our Minds May Arrive Top-Down Not Bottom-Up
- Fancy New Technology Fails to Prove Memory Dogmas
- The Argument for Determinism Collapses Once We Discard the "Minds Come from Brains" Dogma
- Animal Experiments Conflicting with the Dogma That the Brain Stores All Memories
- Memory Recall Reality Versus the "We Can't Remember Well" Bunk of Professors
- Neuroscientists Keep Using Misleading Coloring in Brain Visuals
- Most Scientists Don't Follow Formal Evidence Standards, Unlike Judges
- Experimental Evidence for ESP Is Well-Replicated
- Imaging of Dendritic Spines Hint That Brains Are Too Unstable to Store Memories for Decades
- NIH Bets $1,434,188 That Synapses Don't Store Memories
- A New Case of Very Large Brain Damage and Normal Mental Function
- When Clue-Blind Professors Ignore All the Signs

"Anders was married and 74 years of age. He had ended his working career in a leading position for a company with 20 employees. He viewed himself as an easy-going man who, for the most part, had a bright outlook on life. ***He experienced an NDE during an SCA [sudden cardiac arrest] that lasted nearly two minutes. He said that the NDE started with a brightly lit, joyful meeting with his parents when he was about two or three years old, followed by a life review, where he re-experienced his life at intensely high speed. He said that if he had compared it to the world's fastest computer, the computer would have been slow in contrast.*** *To him, the experience was clear and vivid, featuring memories and people from his past who were alive again. He also explained that before the experience, he did not believe in any form of continuation of life after death, although he said he had thought about it previously."*

In another paper on near-death experiences, we read of someone who says, "I reviewed 15 or 20 years of my life in perhaps two seconds." One person's modern account of a near-death experience states this:

"It was a scene from my life. It flashed before me with incredible rapidity, and I understood it completely and learned from it. Another scene came, and another, and another, and I was seeing my entire life, every second of it. And I didn't just understand the events; I relived them. I was that person again, doing those things to my mother, or saying those words to my father or brothers or sisters, and I knew why, for the first time, I had done them or said them. Entirety does not describe the fullness of this review. It included knowledge about myself, that all the books in the world couldn't contain. I understood every reason for everything I did in my life. And I also understood the impact I had on others."

Another person who had a near-death experience stated this:

"*Every detail of every second, every feeling, every thought while I had been alive on Earth was displayed before me in perfect chronological order, from my birth until my electrocution. At the same time, to my amazement, I was re-living my entire twenty-eight years simultaneously!"*

What does all this have to do with whether the brain is the source of the mind, and whether memories are stored in brains? The credibility of claims that memory recollections come from brains is inversely proportional to the speed and capacity at which things can be recalled. There are numerous signal slowing factors in the brain, such as the relatively slow speed of dendrites, and the cumulative effect of synaptic delays in which signals have to travel over relatively slow chemical synapses (by far the most common type of synapse in the brain). As explained in my post here, such physical factors should cause brain signals to move at a typical speed very many times slower than the often cited figure of 100 meters per second: a sluggish "snail's pace" speed of only about a centimeter per second (about half an inch per second). Ordinary everyday evidence of very fast thinking and instant recall is therefore evidence against claims that memory recall occurs because of brain activity, particularly because the brain is totally lacking in the things humans add to constructed objects to allow fast recall (things such as sorting and addressing and indexes). The more evidence we have of very fast thinking and very fast and very capacious recall (what a computer expert might call high-speed high-throughput retrieval), the stronger is the evidence against the claim that memory recall occurs from brain activity.

- Why Neuroscience Hasn't Delivered for Psychiatry
- Panpsychism Arguments Involve an Equivocation Fallacy
- He's Strangely Seeking Memories in Cells Below the Neck
- Just Call Them "Machine-Metaphor-Misguided"
- Way Off in Their Predictions, Neuroscientists Keep Misdescribing Human Memory Performance
- The Biggest Brain Projects Are Still Failing to Support Prevailing Brain Dogmas
- A New Paper Reminds Us Neuroscientists Can't Get Their Story Straight About Memory Storage
- NSF Grant Tool Query Suggests Engrams Are Not Really Science
- Suspect Shenanigans When You Hear Claims of "Mind Reading" Technology
- No, a USC Team Did Not Show "How Memories Are Stored in the Brain"
- Why ESP Discredits the "Brains Make Minds" Claim
- Beware of Neuroscientists Using Cell Nicknames
- The Press Often Gives Us Fake News About Brains
- No Solid Principle Justifies "Brains Make Minds" Thinking
- "Thousands of Participants Are Needed for Accurate Results," But Most Brain Scan Studies Don't Even Use Dozens
- Why the Academia Cyberspace Profit Complex Keeps Giving Misleading Brain Research Reports
- "Brains Make Minds" Idea Flunks an Audit of a Large Brain Scan Database
- Big Study Finds Brain Gray Matter and Cortical Thickness Peak at Age 6 or Earlier, Contradicting Brain Dogmas
- Why the "A Memory Is Stored Throughout the Brain" Idea Makes Things Much Worse
- Principles of a Post-Materialist Science
- EEG Studies Fail to Provide Robust Evidence That Brains Think or Retrieve Memories
- Seven Things in Fast Retrieval Systems, None of Which Your Brain Has
- Studies Debunk Hippocampus Memory Myths
- 11 Authorities Seem to Realize That "Your Brain Is a Computer" Is a Junk Metaphor

What we have in the "life reviews" of near-death experiences is evidence of enormously fast and capacious "high throughput" memory recall. Often in a very short span of time people are able to recall with great clarity and vividness the most important moments of their life. Such recall should be absolutely impossible from a brain, given all of the physical shortfalls of the brain which should prevent it from being able to produce extremely rapid recall -- factors such as a total lack of sorting and addressing and indexing, and a relatively slow rate of signal transmission caused by factors such as relatively slow chemical synapses and cumulative synaptic delays.

In the paragraphs above I mention only signal speed time. Then there is the fact that if memories were stored in a brain, there would have to be some system (unlike any ever discovered or ever even described by any detailed theory) by which sensory experiences were encoded as brain states or synapse states, through some chemical translation process, with the opposite (a decoding) occurring during recall. The decoding part would be a sluggish affair, which would never allow experiences such as a person very rapidly recalling in a flash many things that had happened in his life. We know of a decoding process that occurs in cells, DNA translation decoding involving an encoding scheme (the genetic code) vastly simpler than any system that would be required for encoding and decoding stored human memories. DNA translation occurs at a fairly sluggish rate of about one minute per protein.

Here is a quote from one recent study of near-death experiences:

"*In my review of 617 near-death experiences from NDERF, a life review occurred in 88 NDEs (14%). None of the life reviews in these NDEs appeared to have any unrealistic content as determined by my review or based on comments by the NDErs about their own life reviews. Life reviews may include long forgotten details of their earlier life that the NDErs later confirm really happened. If NDEs were unreal experiences, it would be expected that there would be significant error in life reviews and possibly hallucinatory features. "*

at May 21, 2024 No comments:

Labels: life review, memory recall, near death experiences

Tuesday, May 14, 2024

Trying DMT Drug Trips Is the Wrong Way to Research Near-Death Experiences

Very many of today's neuroscientists waste endless hours and vast amounts of money doing the wrong kind of research. They spend huge amounts of time doing very poorly designed studies that are guilty of various types of Questionable Research Practices such as lack of pre-registration, use of way-too-small study group sizes, lack of adequate blinding protocols, and use of poor methods of measuring animal learning and animal fear (such as the use of unreliable "freezing behavior" judgments). When it comes to researching human mental phenomena, neuroscientists very often fail to do their homework by adequately studying the phenomena and related phenomena. Again and again neuroscientists will rush into some harebrained neuron-related investigation into some type of mental phenomena that the neuroscientist failed to ever study in any depth.

- Don't Be Fooled: Well-Trained Chatbots Aren't Minds
- What the Neuroscientist Should Have Said When Asked About Mind Uploading
- Cognitive Effects of Epilepsy Surgery Clash with "Brains Make Minds" Dogma
- Evolution Does Not Explain DNA, DNA Does Not Explain Bodies, and Bodies Do Not Explain Minds
- "Brain Chemical Imbalance" Theory Is Fading Out as an Explanation for Mental Illness
- Why Plasticity and Neurogenesis Fail to Explain Minds That Work Well After Massive Brain Tissue Loss
- They're Calling It a Huge Memory Research Fraud, But Is It Only the Tip of the Iceberg?
- So Much Misleading Talk Occurs in Claims of a Scientific Consensus
- Shrink-Speaking About a Mere "Problem of Consciousness" Is As Wrong As Shrink-Speaking About a Mere "Problem of Human Shape Origination"
- Longtermism Is Fueled by a Goofy Belief in Computer-Generated Lives
- Given Their Narrow Studies and Slim Narrow PhD Dissertations, Why Are We So Swayed by Neuroscience PhDs?
- Some of the Weak Papers Neuroscientists Cite As Evidence for Their Chief Claims
- For Insight About Your Brain and Mind, Ponder the Never-Founds
- TV Medical Dramas Give Us Wrong Ideas About Minds and Death
- Brain Imaging Shows No Appreciable Neural Correlates of Memory Activity
- The Evidence Inversion Syndrome Blights Academia
- Poorly Designed Brain Scan Experiments Needlessly Put the Needy at Risk
- Science Literature Is Full of Misleading Claims About Brain Waves
- The US Government's False Claims About DNA
- If Neuroscientists Acted Like Cosmologists, They Might Say You Have an Invisible "Dark Brain"
- Exceptionally Fast Thinking Cannot Be Explained by Slow Brains Like We All Have
- Scientists and Clergy Have Much in Common
- 30 Things That Would Never Occur If Prevailing Neuroscientist Dogmas

A recent essay by neuroscientist Christof Koch sounds like another example of a neuroscientist doing research in the wrong way. Koch discusses near-death experiences, and then tells us he took some of the hallucinogenic drug DMT, making it sound like he did this to get insight about near-death experiences. That sounds very silly. 99% of near-death experiences occur to people who did not take any hallucinogenic drugs, but who have had experiences such as heart attacks and automobile accidents. There does not exist in the human brain more than the most minute trace amount of DMT, and speculations about DMT being released during a near-death experience are without any foundation, as I discuss here. The question of DMT in the brain was clarified by David E. Nichols in a paper he authored in the Journal of Psychopharmacology. Speaking of DMT (also known as N,N-dimethyltryptamine) in the paper Nichols says, "It is clear that very minute concentrations of N,N-dimethyltryptamine have been detected in the brain, but they are not sufficient to produce psychoactive effects."

Elsewhere describing his DMT experience with the words "I almost died," Koch gives this description of his DMT experience, which is internally inconsistent, and does not hold water as an accurate account of his experience:

" *As I was sucked into a black hole, my last thought was that with the dying of the light, I too would die. And I did. I ceased to exist in any recognizable way, shape, or form. No more Christof, no more ego, no more self; no memories, dreams, desires, hopes, fears—everything personal was stripped away. Nothing was left but a nonself: this remaining essence wasn't man, woman, child, animal, spirit, or anything else; it didn't want anything, expect anything, think anything, remember anything, dread anything. But it experienced. It saw a point of cold white light of unbearable intensity, a timeless universe convulsed to a blazing, icy light. That and a profound feeling of both terror and ecstasy, the awfulness of pure experience lasting indefinitely—for there was no perception of time. The experience wasn't brief or long. It simply was."*

This account is self-contradictory. On one hand, Koch records having memories of experiencing intense emotions, but on the other hand he claims that he had "no memories" and "no more self." If you had memories of an experience, then it can't be accurate to say you had "no memories" and did not "remember anything." And the only way you can have intense emotions is as a self, not as a total non-self. We need not take very seriously any claims Koch has made about temporarily becoming a non-self by using DMT. Such claims may be just subjective interpretations of an unusual experience he had.

Very strangely, Koch attempts to insinuate that his DMT trip had some relevance to explaining near-death experiences. He sounds like someone who has never very seriously studied such experiences. The Greyson Scale (widely used in research on near-death experiences) is a list of the common features of near-death experiences. Some experience of having "no memories" is not one of the items on such a list. Some experience of having "no self" is not one of the items on such a list. Quite the opposite often occurs in near-death experiences. People have experiences of being a kind of "realer-than-real" version of themselves, and have very distinct and very vivid memories of such experiences, describing them in great detail. For example, in the account of a near-death experience here, a woman says, "I was more of a person than I had ever been before." And instead of finding themselves with "no memories,"

Were True

- "Brains Make Minds" Models All Flunk a Large Brain Scan Study
- The Philosophy of Teleospiritism
- The Biggest Blunders of Theories Such as Integrated Information Theory
- Study Finds No Robust Link Between Brain Structure and Personality
- The Two Huge Mistakes Involved in Typical Talk of a "Hard Problem of Consciousness"
- Neuroscientists Keep Wrongly Assuming the Source of Something Must Be Near Its Observed Manifestations
- The Vague Unfounded Boasts of Biology Sound Like the Vague Unfounded Boasts of Astrophysics
- 8 Reasons for Doubting Claims of the Heritability of Intelligence
- Widely Read Scientific Paper Asks, "What If Consciousness Is Not an Emergent Property of the Brain?"
- Exhibit A Suggesting Scientists Don't Know How a Brain Could Retrieve a Memory
- Exhibit B Suggesting Scientists Don't Know How a Brain Could Retrieve a Memory
- More Indications Scientists Don't Understand How a Brain Could Think or Remember
- Studies New and Old Fail to Show a Big Link Between Brain States and Minds
- Free E-book: Failing Dogmas of Brain Researchers
- Wobbly Hand-Waving Guesswork of the Synapse Memory Theorists
- Cryogenic Electron Microscopy Helps Clarify Synapses Bear No Resemblance to Information Storage Structures
- Did a Stealth Religion Infiltrate Academia?
- Human Thoughts and Memory Are Gigantically Connective, But Brains Have Only Low Connectivity
- Exhibit A Suggesting Scientists Have No Understanding of How a Brain Could Imagine Anything
- There Is No Evidence of a Neural Explanation for Out-of-Body Experiences
- Misleading Claims in Attempts to Naturally Explain Near-Death Experiences and Out-of-Body Experiences
- The Latest Evidence That Scientists Trying to Explain Memory Creation

people having near-death experiences very often report having a "life review" experience in which they vividly review or re-experience some of their most important life experiences. Here is a typical account:

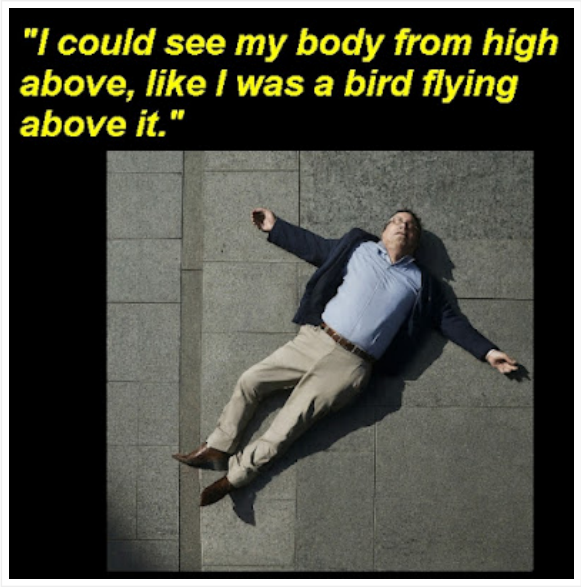
"It was a scene from my life. It flashed before me with incredible rapidity, and I understood it completely and learned from it. Another scene came, and another, and another, and I was seeing my entire life, every second of it. And I didn't just understand the events; I relived them. I was that person again, doing those things to my mother, or saying those words to my father or brothers or sisters, and I knew why, for the first time, I had done them or said them. Entirety does not describe the fullness of this review. It included knowledge about myself, that all the books in the world couldn't contain. I understood every reason for everything I did in my life. And I also understood the impact I had on others."

People having near-death experiences also report forming vivid new memories during such experiences, such as memories of contacting deceased relatives or encountering some mystical realm of existence.

PLAN TO RESEARCH NEAR-DEATH EXPERIENCES:
1. Read accounts of near-death experiences.
2. Study books on near-death experiences.
3. Talk to people who had near-death experiences
4. Drug myself with dangerous hallucinogenics.
DOGMAS

Koch gives some language which sounds like he is trying to make people guess that he had something a little like an out-of-body experience, saying, "My mind gradually returned to my body." But he does not describe anything like the out-of-body experiences that so often occur during near-death experiences. In such an experience an observer will see their physical body from a viewing position outside of their body. Koch reports no such thing. It sounds like he was merely kind of spaced-out by the drug he took, and then very gradually got back to normal, as the effects of the drug very gradually diminished. That isn't having an out-of-body experience. People who have out-of-body experiences during near-death experiences do not report gradually returning to their body, but instead report very suddenly returning to their bodies.

Are Lost in the Woods
- Study Suggests Massive Faking in Neuroscience Papers
- How Neuroscientists and Science Writers Try to Fool You Into Thinking Brains Store Memories
- Some People Our Neuroscientsts Don't Want You to Know About
- 10 Reasons Synapses Cannot Be a Storage Place for Human Memories
- Why Most Correlation-Fishing Experimental Neuroscience Is Worthless
- Pharmaceutical Company Entanglements Cloud the Objectivity of Neuroscientists and Psychiatrists
- The 4 Nonsensical Parts of the Tale Your Brain Instantly Retrieved an Answer Learned Long Ago
- Neuroscientists Don't Seem Like Paragons of Diligence
- "Brain Is the Most Complex Object in Universe" Claim Exemplifies Credulity About Brain Claims
- Exhibit A That Scientists Have No Understanding of a Physical Basis of Human Memory
- Goofs of the Site Brainfacts.org
- Shady Tricks Used by Writers About the Brain
- The 11 Biggest Neural Shortfalls Hinting Brains Don't Make Minds
- Analysis of 23,810 Brain Scans Finds "Neither Structural Nor Functional Imaging Predicted Individual Psychology"
- All Papers Relying on Rodent "Freezing Behavior" Estimations Are Junk Science
- The Human Brain Project Spent Billions, But Failed to Bolster Claims About Brains Making Minds
- Hydrocephalus Studies Confirming Low Correlation Between Brain States and Intelligence
- The Lack of Evidence That Brains Produce Dreaming, and Some Evidence Hinting They Don't
- How the Academia-Cyberspace-Pharmaceutical-Biotech-Publishing Complex Incentivizes Bad Brain Research
- The Lack of Correlation Between Most Mental Illness and Brain States
- They Stored and Studied Thousands of Brains, But Still Failed to Show Mental Illness Comes From Sick Brains
- They Stored and Studied Thousands of Brains, But Still Failed to Show Brains Store Memories



The type of accounts we get in near-death experiences

We may wonder: what was this "point of cold white light" Koch describes seeing which he describes as having "unbearable intensity"? This sounds nothing like what is reported in near-death experiences. In such experiences people often report encountering a Being of light, which they describe as having enormous warmth and love, rather than a cold point of light. An honest title for Koch's essay would have been, "I Tried a DMT Trip, and It Was Nothing Like a Near-Death Experience."

Our "sounds like he didn't do his homework" neuroscientist makes these untenable claims:

"All three classes of transformative experiences that I described—religious or mystical, psychedelic-induced, and near-death experiences—probably have a common underlying neurobiological mechanism. One possibility is a lull of neural activity in the posterior hot zone, especially in the visual, auditory and somatosensory cortices, posterior cingulate, and precuneus cortices."

Near-death experiences typically involve very vivid visual imagery. Under the "brains make minds" hypothesis, it makes no sense to be trying to explain very vivid experiences by imagining a "lull" or decrease in neural activity in the visual part of the brain. It is nonsensical to claim that an experience produced by psychedelics has a "common underlying neurobiological mechanism" with experiences that are not produced by psychedelics. That's like saying that cars raised in the air by cyclones are raised by a "common underlying mechanism" as cars raised in the air at auto shops. Near-death experiences commonly occur to people during cardiac arrest, when electrical activity in the brain has shut down. As discussed here, EEG readings show that electrical activity shuts down within a few seconds after the heart stops. When that happens, you do not have a mere "lull of neural activity" but a cessation of neural electrical activity. It is just such a cessation that rules out neural explanations for near-death experiences.

The study here discusses EEG readings taken during DMT trips. Those taking DMT trips have not-very-unusual brain waves that are nothing like the flatlining of brain waves that occurs during cardiac arrest. So Koch's claim of a "common underlying neurobiological mechanism" in near-death experiences

- Major Journal Suggests 3% of Biology Papers Look Like Paper Mill Junk
- This Is What Built the Mighty Castle of Materialism
- Comparing the Dogmas of Cosmology and Biology
- Why Scientific Academia Is Like an Organized Religion
- How to Interview an Overconfident Biologist
- Neuroscientists Claim "Drifting Representations," But It's Mainly Just Their Pareidolia
- Neuroscience "Best of 2023" Reviews Suggests They're Getting Nowhere Trying to Explain Minds by Neural Explanations
- Convoluted "Spaghetti Code" Analysis Pathways Help Neuroscientists Conjure Phantasms That Don't Exist
- 50 Types of Questionable Research Practices
- Cox's Cases Were Better Explained as Evidence Brains Don't Make Minds
- No, Scientist, That Isn't Human Memory or Brain Action, But Merely Computer Activity
- You Would Never Guess From Her Videos That She Has No Frontal Lobes
- Neuroscientists Often Sound Like They Never Seriously Studied Psychical Research
- DNA Is Not a Blueprint, So "All Bets Are Off" About Body Origins and Mind Origins
- Universities Continue to Boast About Pitifully Weak Neuroscience Results
- A Biochemist's Promissory Note About Explaining Minds Sounds Very Lame
- No One Is Actually Doing Thought-Reading by Scanning Brains or Reading Brain Signals
- A Biologist Calls "Orthodox Science" a "Religion" and "Belief System"
- She Has Photographic Memory and Severe Unmanageable Epilepsy
- Traumatic Brain Injury Results Clashing With Prevailing Dogmas About Brains
- "Cells With Minds" Theory Is As Bad As "Brains Make Minds" Theory
- Surprising Studies on Memory Loss or IQ Changes After Brain Surgery or Brain Damage
- Pareidolia Helps Neuroscientists Getting Nowhere Trying to Show a Brain Basis for Memory

and DMT trips is untenable. A brain with its electrical activity shut down is in a totally different state than a brain with near-normal EEG readings.

Instead of taking a DMT trip, Koch should have seriously studied near-death experiences and related paranormal experiences for insights. But alas, most neuroscientists these days seem to be not-very-diligent scholars of human minds and the full spectrum of human mental experiences. Koch is a proponent of the extremely misguided theory called integrated information theory, which you can read about in my posts here. The theory relies on shadow-speaking about human minds, in which human minds are typically described using the "make it sound like a mere shadow of itself" term "consciousness," an approach that we tend to get from lazy scholars of human minds and human mental experiences, who don't want to go to the trouble of deeply studying and analyzing the full spectrum of human mental experiences and human mental abilities.

A 2023 paper by Christof Koch has the misleading title "Do not go gently into that good night: The dying brain and its paradoxically heightened electrical activity." Making use of a vague term "end-of-life" (a term which is not clear about whether it means before or after a heart stops) Koch states this:

"These end-of-life EEG surges were initially believed to be artifacts but are now recognized as reflecting high-frequency brain activity. They are common (46% in ref. 3) in critically ill patients who die but, importantly, are not found in brain-dead patients."

See the appendix of this post for why the study he references does nothing to show surges in brain activity after the heart stops. The title of Koch's paper is misleading. There is no robust evidence of "heightened electrical activity" after the heart stops in a dying person. To the contrary, the evidence shows unequivocally that brains shut down and flatline within about 10 seconds after a heart stops. That fact is one that prevents any credible neural explanation for near-death experiences, which are often long, vivid experiences that occur after a person's heart has stopped.

The person who has thoroughly studied near-death experiences may understand why such experiences destroy the credibility of claims that the brain is the source of the mind. In near-death experiences many people whose hearts have stopped and brains have shut down (in a flatline effect) report having extremely vivid "realer than real" experiences, totally contrary to what we would expect from claims that the brain makes the mind. In such near-death experiences people often report floating above their bodies, seeing them from something like three or four meters away. Such reports should never occur if the brain is the source of the mind. And often in near-death experiences people will report observing earthly things that they never should have been able to observe if the brain is the source of mind. You can read about such reports here and here.

Then there's the reality of incredibly fast memory recall in near-death experiences. In such experiences people will often report some incredibly fast recall in which they recalled very quicky all of the major life experiences they had had. The ordinary fact of instant recall is the gravest problem for all claims that memory recall occurs through brain activity, for reasons I fully explain in my post "Why the Instantaneous Recall of Old Memories Should Be Impossible for a Brain." There is not a neuroscientist in the world who can give a halfway credible explanation as to how a human can instantly recall facts

- HSAM Memory Whiz Subjects Scored 25 Times Higher on a Random Dates Test
- How High-Speed Life Reviews in Near-Death Experiences Discredit "Brains Make Minds" Claims and "Brains Store Memories" Claims
- More Indications That Scientists Have No Understanding of How a Brain Could Think
- Searching Hard for Evidence of Strokes Causing Loss of Episodic or Conceptual Memories, They Come Up Short
- Cognitive Neuroscience Is Floundering, So the Kavli 2024 Neuroscience Prize Went to Low-Quality Research
- We Cannot Trust Neuroscientists to Speak Accurately About What Brains Do and What Minds Experience
- The Mythology of "Memory Maintenance Molecules"
- No, Noise Miners, Neurons Don't Encode Words
- The Lack of Bodily Addresses Crushes the Credibility of Mechanistic Biology and Mechanistic Psychology
- She Didn't Seem to Need the Right Half of Her Brain, and Losing It Did Not Seem to Dim Her Memories
- 60+ Aspects of the Human Mind, and Whether Brains Explain Them
- Papers Claiming Brain Memory Storage Keep Citing Poor Science Papers
- A Report of "Unimpaired Faculties Without a Brain" (John Bly)
- Exhibit A That There Is No Such Thing as a Chemical Root of Consciousness
- Look Very Closely at a Study Claiming Thought Reading of Brains, and You'll Find the Shady Tricks Behind It
- UK Biobank Study of Thousands of Brains Finds Negligible Correlation Between Brain Size and Intelligence
- Neuroscientists Senselessly Think They Can Perform Innumerable Contortions of Brain Data, and Then Claim a Discovery
- They Mapped 150 Million Synapses, and Found No Sign of Stored Memories
- Brains Show No Physical Signs of Reading or Retrieval When You Recall Something
- In 1941 the Editors of Scientific American Confessed That Telepathy Was Proven
- Old Newspaper Stories Relevant to Whether Brains Make Minds

as quickly as people do when they play the game show *Jeopardy*. Such instant recall should be impossible in a brain, which has none of the things that computers have which allow fast retrieval of information: things such as addressing, indexing and sorting. The near-death experience vastly exacerbates the instant recall problem, by giving us countless cases of people who claimed to have "seen their whole lives flash before their eyes," as if they could suddenly recall all of their main life events instantly -- with this often occurring in shutdown brains when such recall should be the least likely thing to ever occur. I will explain this point more fully in my next post.

Because near-death experiences blast into smithereens the credibility of claims that neuroscientists like to make (that the mind is merely the product of the brain and that memories are a neural effect), I can understand why all the reports of near-death experiences might cause a kind of panic mode in neuroscientists, leading them to start throwing desperate Hail Mary passes such as trying to go on DMT drug trips in hopes of resolving their dilemma.

I myself am a lifelong non-drinker and non-smoker who has never used any kind of illegal drugs or so-called mind-expanding drugs. I have never even tried marijuana. Now, I hear quite a few people claiming that the use of certain substances such as LSD or DMT or psilocybin can be "mind-expanding." And I have written very much about certain types of experiences that seemed mind-expanding such as near-death experiences and experiences under hypnotic trances. So, you may ask, why don't I try adding to my body of knowledge and study by experimenting with such substances? Let me try to answer in a way that I hope will not sound "holier than thou," but which is mostly peculiar to my situation, rather than any invocation of a general principle.

The first reason I avoid all alcohol and all mind-altering substances has to do with my long-time history as an observer of spooky phenomena and paranormal-seeming phenomena. My observations of spooky phenomena have long been published on my "Orb Pro" blog you can read here. Mostly these observations consist of photographs and videos. But an important subset of the observations involve my frequent eyewitness testimony of spontaneous spooky events that I was not able to photograph, typically because of an event occurring so quickly. Now, for me it is important that my reports of such spooky events have high credibility. And I think that the credibility of such reports might be weakened if I were the type who sometimes uses substances that might distort a person's perception or judgment, or substances that might produce a hallucination. I wish to always be a Grade A witness to anything paranormal-seeming that I report, with all observations occurring when I was as sober as a judge. I don't wish to engage in consumption of alcohol or mind-altering substances that might make me less than a Grade A witness of such phenomena.

Another reason I avoid all alcohol and all mind-altering substances has to do with my long-standing role as a trying-to-be-objective analyst of minds, brains, human mental phenomena, biology, psychic phenomena and grand philosophical topics such as whether our universe is a mere accident or the product of some transcendent will. I want for my analysis of such topics to be based on solid reasoning, solid evidence and solid scholarship rather than subjective feelings that might be produced by mind-altering drugs or mind-affecting drugs. I want my reasoning on such topics to always be very level-headed reasoning, and I wouldn't want to ever publish some post that had a "trippy" or soggy-headed sound to it. When I state a conclusion on one of my

- Newspaper Accounts of Memory Marvels (Part 1)
- Why Your Brain Is Not Like a Computer
- They Memorized Many Times Faster Than a Brain Could Ever Do
- Faltering Neuroscientists Improperly Offer Computer Science Papers as Examples of Neuroscience Progress
- The Brains of 60 Subjects Seemed to Look the Same During Eyes Closed Mental Rest, Recall and Math Activity
- The Problem of Explaining Human Minds Is a Million Times Larger Than a Mere "Problem of Conscious Experience"
- Large Neuron Groups Cannot Be Sequentially Traversed, So Brains Cannot Store Complex Learned Information
- Eyes and Minds Can Focus, But Brains Cannot Physically Focus
- Most Subjects in Neuroscience Research Do Not Understand the Risks They Are Taking
- Neuroscientists Cannot Credibly Explain Any of These 11 Features of Out-of-Body Experiences
- Microscopes Will Never Find the Slightest Trace of Learned Information in a Human Brain
- Newspaper Accounts of Memory Marvels (Part 2)
- The Reason You Will Never Be Able to Upload Your Mind Is the Same Reason You Won't Ever Need To
- Brain Tumors Seem to Have Relatively Little Effect on Cognitive Function
- Newspaper Accounts of Memory Marvels (Part 3)
- They Mentally Calculated Faster Than a Brain Could Ever Do
- Claimed Evidence for "Concept Cells" Is Just Noise-Mining Nonsense
- More Candid Confessions of the Cognition Experts
- Neuroscientists Offer Only the Most Hazy Hand-Waving When Trying to Explain Memory
- List of Breakthrough Prize Winners in Life Sciences Hints at the Lack of Progress in Cognitive Neuroscience
- HSAM Wonder Daniel McCartney Was a Math and Memory Marvel
- LTP Research Has Done Nothing to Show Any Neural Basis for Memory Creation
- The Lack of Strong Links Between Mental Illness and Brain States

blogs, I want my readers to have confidence that my conclusion was based on the calmest reasoning, rather than some emotional state created by drug use or alcohol use.

I hear that some people use mind-altering drugs or leisure drugs or alcohol to reduce stress or the effects of trauma. I would not criticize someone for doing that. In my own case I have been very lucky to have led a mostly low-stress life with no great stress or trauma in the past 40 years (with the exception of the World Trade Center bombing). So having had the great fortune of having had no great stress or trauma for decades, I have had no need to ease pain through the use of drugs or alcohol.

But, you may ask, are you not interested in one day "opening the doors of perception" and taking a sojourn that may offer the thrill of some higher state of consciousness? I am actually very interested in doing just that. But I figure I will not have to wait terribly long before experiencing such a thing. My studies of near-death experiences and many other types of psychic phenomena lead me to think that death is the doorway to a higher state of consciousness and a much greater state of perception. Given my advanced age, I figure that I will not have to wait terribly long before passing through such a doorway, without having to use mind-altering drugs. I can see how it might be very different for some young person. A person who was, say, age 20, might think, "I'm not waiting 60 years for my doors of perception to open."

Appendix: I mention above how Koch has a paper that states this:

"These end-of-life EEG surges were initially believed to be artifacts but are now recognized as reflecting high-frequency brain activity. They are common (46% in ref. 3) in critically ill patients who die but, importantly, are not found in brain-dead patients."

The study that Koch refers to in Reference 3 is the 2017 study "Characterization of end-of-life electroencephalographic surges in critically ill patients." There are quite a few problems with that study. First, it did not use the type of EEG device used by neurologists, but a much cheaper device called the SEDLine device, one "developed as an assessment of hypnosis during anesthesia." The manual of the device tells us that it computes a single number, something called a Patient State Index which it defines as the likelihood that a patient is anesthetized. The devices were not designed for the purpose the paper authors used them for. The SEDLine device does not measure pulse or heart rate. Some dubious-sounding data analysis is described:

"Raw data files from SEDLine devices were de-identified and analyzed with the assistance of engineers from Massimo Inc. Files with adequate data integrity were then analyzed for EEG frequency and waveform characteristics."

That sounds like something that could easily have gone wrong. The paper defined an "end-of-life electroencephalographic surge" as any increase of 50% above baseline, but the paper authors did not have heart-rate data corresponding to their brain wave data, as they were analyzing solely from a head-only device (SEDLine) that does not take pulse or heart rate measurements (according to its manual). So we do not know how many (if any) of these so-called "end-of-life electroencephalographic surges" were things occurring after someone's heart stopped. The term "end of life" (which the

- Subject MM Had a Stupendous Memory for Facts, But a Normal Brain
- Lighting-Fast Readers Exceed the Speed Limits of a Brain
- They Too Mentally Calculated Faster Than a Brain Could Ever Do
- They Did Well After a Huge Loss of Brain Tissue
- Newspaper Accounts of Memory Marvels (Part 4)
- NIH's Million-Dollar "Epigenetic Memory" Bet Fails
- The Myths About Patient K. C. and Patient H. M.
- He Had Half a Brain But "Superior Intelligence"
- New Poll Suggests About 29% of Neuroscientists Doubt the Synaptic Memory Theory
- They Lost Huge Parts of Their Brains, But Their Knowledge and Recollection Were Preserved
- The Groundless Myth That "Floods" or "Surges" Help Explain Near-Death Experiences
- Physically Unrealistic NEPTUNE "Model" of Near-Death Experiences Is a Misleading Mishmash

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paper authors fail to precisely define) is a vague term that could refer to any of the last hours of someone's life. Since it has no combination of brain wave (EEG) data and heart rate data, the paper provides no actual evidence of brain wave surges after a heart stops.

Contrary to the insinuations of this paper, the evidence shows unequivocally that brains shut down and flatline within 10 seconds or 20 seconds after a heart stops. That fact is one that prevents any credible neural explanation for near-death experiences, which are often long, vivid experiences that occur after a person's heart has stopped.

at May 14, 2024 No comments:

Labels: near death experiences

Wednesday, April 3, 2024

The Guardian's Misleading Story on Near-Death Experiences

The British paper the Guardian recently gave us a junk story on the topic of near-death experiences. It pushed a groundless narrative that a neuroscientist named Jimo Borjigin has done something to help explain such experiences, which is not at all correct. Borjigin's work on this topic started out with her 2013 paper with the misleading title "Surge of neurophysiological coherence and connectivity in the dying brain." The paper makes a misleading use of the technical EEG terms "coherence" and "connectivity."

An EEG is a device for measuring brain waves, one requiring the attachment of multiple electrodes on the head. In the technical jargon of EEG analysts, "coherence" means some length of time in which you are getting the same type of brain waves from two different regions of the brain. The paper here states, "Coherence is one mathematical method that can be used to determine if two or more sensors, or brain regions, have similar neuronal oscillatory activity with each other." There are different ways in which the term "connectivity" is used by neuroscientists. One of these ways is "structural connectivity" meaning the number of connections between brain cells. But, according to that paper, there's another way in which "connectivity" is used: "*Functional connectivity* identifies activity brain regions that have similar frequency, phase and/or amplitude of correlated activity."

So given such speech customs, a neuroscientist analyzing the ups and downs of brain waves can claim "coherence" or "connectivity" as long as he sees any type of similarity between different regions of a brain giving the same kind of EEG readings. This is what the authors of the 2013 paper (including Borjigin) did. What they observed was simply the brain waves of rats quickly dying off to become a flat line. But because the brain waves from each regions quickly trailed off and died off in the same way, the authors have called this behavior "coherence" and "connectivity."

While this may not be a very clear case of an outright lie (given the speech habits of EEG analysts), the title of the paper is misleading, because it creates a very false impression in the minds of 95% of the people who read it. 95% of the people reading a title of "Surge of neurophysiological coherence and connectivity in the dying brain" will think that some indication was found of increased cognitive activity in dying brains. The paper found no such thing. The "coherence" and "connectivity" supposedly found was not a surge but merely a blip, and it did not involve anything like some surge of mental

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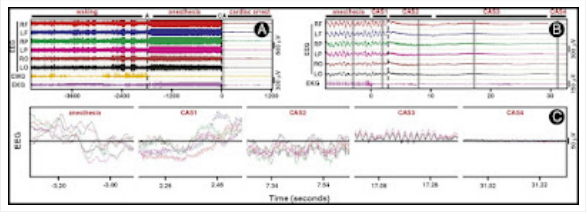
March 2021 (4)

activity. Nothing whatsoever was found that can help to give a neural explanation for near-death experiences. In fact, there is every reason to think that at the time when this little blip of claimed "coherence" and "connectivity" occurred, all of the rats were unconscious.

Figure 1 of the paper is shown below. We see EEG brain wave signals from rats who were injected with a chemical causing the heart to stop.



Nothing impressive is seen. It's just what you would expect: brain signals trailing off and dying out very quickly after the heart stops. This data offers no justification for a title of "Surge of neurophysiological coherence and connectivity in the dying brain." An honest title of the paper would have been: "Brain waves very quickly trail off and die out after hearts stop in rats."

After this paper with a misleading title was published, we had innumerable misleading citations of it in the articles of materialist or mainstream writers, claiming or insinuating that the paper showed or suggested something it did not either show or suggest. An example was a National Geographic article with the misleading title "In Dying Brains, Signs of Heightened Consciousness." The 2013 "Surge of neurophysiological coherence and connectivity in the dying brain" paper had not anything whatsoever to show "signs of heightened consciousness" in the dying rats it studied. Similarly, a 2017 Big Think article linked to the 2013 paper and claimed, "One 2013 study, which examined electrical signals inside the heads of rats, found that the rodents entered a hyper-alert state just before death." This claim is totally false, and the paper suggested nothing of the sort.

The new Guardian story has a mention of this research, and gives us the untrue claim that Borjigin "discovered that rats undergo a dramatic storm of many neurotransmitters, including serotonin and dopamine, after their hearts stop and their brains lose oxygen." No such thing was discovered, and the paper made no mention of either serotonin or dopamine. The Guardian story then refers to another paper Borjigin co-authored, referring to a Patient One mentioned in that paper. The 2023 paper discussed brain readings of coma patients in Michigan, USA who had their life-support systems turned off.

I previously described this paper like this:

- "**Surge of neurophysiological coupling and connectivity of gamma oscillations in the dying human brain.**" Here we have another misleading use of the word "surge" in a science paper headline, a paper co-authored by one of the researchers who authored the equally mistitled rat study "Surge of neurophysiological coherence and connectivity in the dying brain." The paper merely describes a little brain activity in two people after a respirator was turned off, with no evidence of brain activity continuing for more than a few seconds after the heart has stopped. The lines on brain waves charts go up and down, and

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September 2019 (1)
August 2019 (1)
July 2019 (2)
June 2019 (1)
May 2019 (1)
April 2019 (1)
February 2019 (1)
January 2019 (1)
December 2018 (1)
November 2018 (3)
September 2018 (1)
August 2018 (1)
July 2018 (1)
June 2018 (1)
April 2018 (30)

Labels

- "brain as computer" metaphor
- above-average IQ with huge brain tissue loss
- academia dysfunction
- acquired savant syndrome
- adult neurogenesis
- agenesis of corpus callosum
- aging
- AI
- Alzheimer's disease
- amnesia
- analytic idealism
- bad computer programming in neuroscience studies
- bad predictions by scientists
- bad psychiatric surveys
- bad psychiatry
- bilingualism with half a brain

there are seven or so channels of brain waves (including a gamma channel); so at any second you can usually find some little line going up and call that a "surge," although at the same time other lines (representing other brain wave channels) will probably be going down. Using the term "surge" in the title of the paper was misleading, rather like tracking the price of Microsoft, seeing it go up 2% at 2:00, and calling that a surge. The authors of the study did not even report a surge in gamma waves, one of the brain wave channels. Eager to get something they could call a surge, the authors got their little "surge" after some statistical fiddling with the signals, to get some statistical measure that only shows up after arbitrary analytics. Almost any random ten seconds of brain wave activity can be statistically analyzed to show a little "surge" somewhere, if you're willing to dredge up secondary statistical measures. Keep torturing the data, and it will confess as you wish. Shamefully, the journal Science has an article on this paper with the misleading headline "Burst of brain activity during dying could explain life passing before your eyes"; and the Smithsonian site has an equally misleading click-bait headline of "Surging Brain Activity in Dying People May Be a Sign of Near-Death Experiences." There is no evidence that either of these two people had an experience of "life passing before their eyes" or anything like near-death experiences. The subjects were unconscious when the respirator was turned off, and there is no evidence of any consciousness. Unconscious people have gamma wave activity (the activity reported), and you have plenty of gamma activity while you are sleeping. No "neural correlates of the NDE" were reported by the paper. As two MDs point out in a commentary on this paper, "The researchers reported no evidence whatsoever that these brain activities were correlated with conscious experiences in those two patients—and no reason to compare these results with prospective NDE studies in patients who have survived a cardiac arrest."

But senselessly our Guardian article writer attempts to portray this research as shedding some light on near-death experiences. We have a quote by Borjigin not matching anything reported in her scientific paper. "As she died, Patient One's brain was functioning in a kind of hyperdrive," Borjigin tells the article writer. That does not match any data reported in the scientific paper, which shows nothing special happening in the patient's brain as she died. In fact, see the first visual below which plainly contradicts such a claim, showing this Patient One's brain waves trailing off into flat lines as her heart stopped. "Hyperdrive" is a word used in science fiction, and is not a legitimate neuroscience word. We read, "Given the levels of activity and connectivity in particular regions of her dying brain, Borjigin believes it's likely that Patient One had a profound near-death experience with many of its major features: out-of-body sensations, visions of light, feelings of joy or serenity, and moral re-evaluations of one's life." This is a groundless and implausible speculation not supported by any evidence.

As two MDs point out in a commentary on this paper, "The researchers reported no evidence whatsoever that these brain activities were correlated with conscious experiences in those two patients—and no reason to compare these results with prospective NDE studies in patients who have survived a

- binary memory storage theory
- biotech industry influence on neuroscience
- brain abscess
- brain changes with age
- brain collections
- brain connectivity
- brain cyst
- brain effect on personality
- brain imaging
- brain injury
- brain physical shortfalls
- brain research projects
- brain shortfalls
- brain signal speed
- brain size and intelligence
- brain surgery
- brain tumors
- brain uploading
- brain waves
- calendar calculator
- CAMKII
- CBC theory
- chemical imbalance theory of mental illness
- citation errors
- citation of low-quality research
- claim of Jennifer Aniston cell
- claims of brain localization
- claims of chromatin involvement in memory
- claims of concept cells
- claims of concept-selective regions in the brain
- claims of epigenetic encoding of memory
- claims of mind reading by brain scans
- claims of neural correlates of love
- claims of neural correlates of memory activity
- claims of neural correlates of mental activity
- claims of neural representations
- claims that brains think
- clairvoyance
- conscious cells theory
- consciousness
- consciousness shadow-speaking
- corporate funding of neuroscientists
- COVID-19
- cryo-EM
- Darwinism

cardiac arrest." There are no known neural correlates that are signs of near-death experiences, so no match has been made to any such correlates. So the belief attributed to Borjigin (about the patient having a near-death experience with particular features) is every bit as silly as someone looking at some EEG readouts of a dying patient and saying, "I believe she was having a vision of becoming the queen of Mars," when the patient never spoke a word.

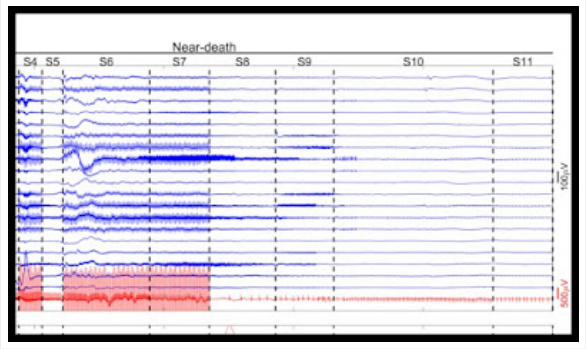
But that's how so many of our neuroscientists are these days. It seems so many of them are so often squinting at data and claiming to see things that aren't really there, and jumping to conclusions without any warrant. It seems that our neuroscientists (members of a belief community with entrenched dogmas) tend to be very big People of Belief. A neuroscientist such as Borjigin believes without the slightest warrant that a silent dying patient had a near-death experience with particular features. And neuroscientists believe without any good warrant the "old wives' tales" stories of their conformist belief community, such as the claim that brains store memories and that brains produce thinking and imagination and ideas (disregarding a great wealth of evidence discussed in this site's posts that brains are too slow, noisy, unstable and unreliable to explain the wonders of human mental performance, and disregarding the failure of any microscopic examinations of brain tissue to ever find any trace of learned human knowledge).

The Guardian article writer makes use of a little trick to fool readers into thinking that brain activity continues after the heart stops. The trick is to discuss two cases when life support machines were turned off and brain activity continued for a tiny bit, and to try to insinuate that this means that brains keep working minutes after hearts stop, something that is not true. The article says, "At the very least, Patient One's brain activity – and the activity in the dying brain of another patient Borjigin studied, a 77-year-old woman known as Patient Three – seems to close the door on the argument that the brain always and nearly immediately ceases to function in a coherent manner in the moments after clinical death." No, that isn't true at all, because turning off a life support machine is not the same as stopping the heart. Both the heart and the brain may continue to work for a few minutes after a life support machine has been turned off.

The evidence on this matter is crystal-clear: within 15 or 20 seconds after the heart has stopped, brain activity as measured by EEG dies away to become a flat line. In fact, if we look at the Supplemental Information document of Borjigin's paper on this Patient One, we get some information that very much contradicts what the quote above states (information which also shows the untruth of Borjigin's claim that this patient's brain was in "hyperdrive" as she died).

Below is part of Figure S1A from the supplemental information of the paper. We see the brain waves of the dying Patient One in blue (EEG readings), and we see in the last row a red ECG reading that is a measure of heart activity.

- default mode network
- dementia
- dendritic spines
- depression
- distributed recall hypothesis
- DNA
- dreams
- EEG studies
- eidetic memory
- emergence
- emergentism
- engram
- epigenetics
- epilepsy
- ESP
- evolution
- exceptional auditory memory
- exceptional mathematics ability
- exceptional memory
- exceptional multitasking
- exceptional musical memory
- exceptional reading ability
- exceptional recall of facts
- exceptional recall of number sequences
- exceptional recall of text sequences
- exceptional recognition memory
- exceptional speed of memorization
- exceptional speed of thinking
- exceptional time-related ability
- excessive and potentially hazardous brain scanning in neuroscience research
- extent of paranormal experience
- famous neuroscience case histories
- fastest memorizers
- feedback loops
- file drawer effect
- first rule of neural explanation
- fMRI
- free books by Mark Mahin
- free will
- free-exploratory neuroscience technique
- freezing behavior
- frontal lobes
- fusiform face area
- Gadolinium contrast agents
- gaslighting
- genes
- global workspace theory

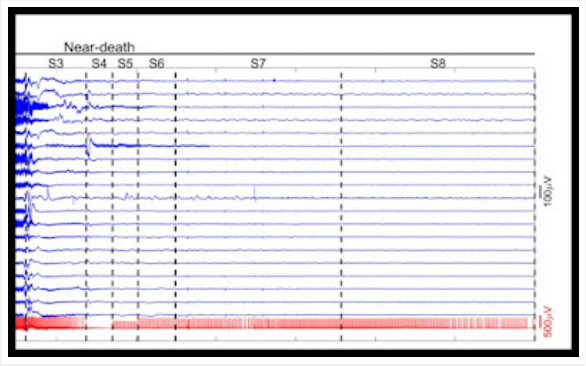


The text below this visual tells us this about these stages that are labeled S5, S6, S7, S8, S9 and S10, using the term "bradycardia" which means lower-than-normal heart rate:

"The pacemaker was automatically turned off (S5) and restarted from S6. S7 starts when rapid heartrate drop was seen which ended when pacemaker was turned off by clinical staff. S8 denotes the bradycardia period where RR interval (RRI) is longer than 5s. In S9, RRI is below 5s (partial heartrate recovery). S10 saw the reappearance of the P-waves and further recovery of heartrate. S11 ends at the last recorded heartbeat with periodical PAC-like ECG pattern."

The evidence in this case is crystal clear: there was virtually no brain activity at stage S10 (when there was "further recovery of heartrate") and no brain activity at all at stage S11, which ended with the "last recorded heartbeat." The case of this Patient One thereby shows the untruth of the Guardian writer's claim that "At the very least, Patient One's brain activity – and the activity in the dying brain of another patient Borjigin studied, a 77-year-old woman known as Patient Three – seems to close the door on the argument that the brain always and nearly immediately ceases to function in a coherent manner in the moments after clinical death." To the contrary, the data on this Patient One showed that her brain activity had shut down completely by the time of her last heartbeat.

Below is the brain wave data on Patient Three, as displayed in Figure S1C of the supplemental information of the paper. The blue lines are EEG brain wave readings, and the red line at bottom is an ECG heart activity reading.



Below this visual is this description which refers to stages such as S5 and S6:

- gnostic cells
- groupthink
- health hazards in neuroscience experiments
- hemispherectomy
- high mental function despite large brain damage
- hippocampus
- how to detect bad neuroscience
- HSAM (Highly Superior Autobiographical Memory)
- Human Brain Project
- hydrocephalus
- hyperlexia
- hyperscanning
- hyperthymesia
- hypnosis
- idea creation
- idealism
- imagination
- inappropriate neuroscience prize awards
- informed consent
- instincts
- integrated information theory
- intelligence after brain injury
- intelligence of animals with small brains
- interbrain synchrony
- IQ increase after brain tissue removal
- IQ increase after hemispherectomy
- keep-torturing-the-data-until-it-confesses tactics
- lack of corpus callosum
- lack of neural correlates of thinking
- lack of progress in cognitive neuroscience
- life review
- longtermism
- loss of cerebellum
- loss of corpus callosum
- loss of frontal lobes
- loss of half of brain
- loss of left half of brain
- loss of most of brain
- loss of right half of brain
- loss of temporal lobe
- low connectivity of brains
- low statistical power in neuroscience experiments
- LTP
- M. Mahin autobiographical sketch
- materialism

"*In S5, heartrate was partially recovered. During this period, R-peak duration increased. P-waves became invisible. In S6, while heartrate was maintained at the same level as in S5, R-peak width returned to a normal level but still without visible P-waves. In S7, while heartrate saw further recovery (shortening of RRI), PR interval lengthening became evident on ECM. The PR-interval continued linear expansion in S8, which ended at the last recorded heartbeat.*"

The evidence in this case is crystal clear: there was virtually no brain activity at stage S7 ("while heartrate saw further recovery") and no brain activity at all at stage S8, which ended with the "last recorded heartbeat." Like the case of Patient One, the case of this Patient Three thereby shows the untruth of the Guardian writer's claim that "At the very least, Patient One's brain activity – and the activity in the dying brain of another patient Borjigin studied, a 77-year-old woman known as Patient Three – seems to close the door on the argument that the brain always and nearly immediately ceases to function in a coherent manner in the moments after clinical death." To the contrary, the data on this Patient Three showed that her brain activity had shut down completely by the time of her last heartbeat. The data of the supplemental information document tells the same story for Patient Two and Patient 4: none of the EEG lines of the four patients show significant brain electrical activity after the heart stopped beating.

The data above is consistent with one of the main claims made by those arguing that near-death experiences are beyond any neural explanation: the claim that brain activity ceases within a few seconds after the heart starts beating during cardiac arrest. It is very baffling that Borjigin has given an interview with the Guardian trying to insinuate that the cases of such patients do anything to support any neural explanation for near-death explanation. We may reasonably ask: did Borjigin bother to study the data in the supplemental information of her paper, data that so clearly defies such insinuations? And did the writer of the Guardian article bother to study such data, defying some of what he wrote?

Borjigin is quoted as making the statement, "The brain, contrary to everybody's belief, is actually super active during cardiac arrest." This claim is every bit as misleading as saying that the heart is very active when someone shoots a rifle bullet through it. The fact is that a heart will stop pumping when you shoot a rifle bullet through it, and a brain will stop its electrical activity when the heart stops. The charts above show how misleading Borjigin's quote is. Why were such charts (contradicting Borjigin's claims) hidden away in the supplemental information attachment of Borjigin's paper? They should have been in the main text of the paper.

One of the many misleading parts of the Guardian article is when the author attempts to insinuate that those interested in life after death (and believing in signs from the deceased) have lost interest in near-death experiences, an insinuation that is very untrue. Always expect misleading information in mainstream publication articles about paranormal phenomena. Always remember that the authors of such articles are very rarely careful scholars of the topics they are writing about.

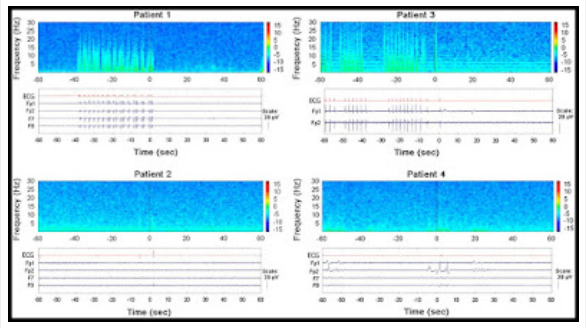
- mechanistic biology
- memory after brain injury
- memory encoding
- memory maintenance
- memory recall
- memory storage
- mental focus
- mental illness
- methylation theory of memory storage
- microscopic analysis of brain tissue
- microtubules
- mind over matter
- mind uploading
- misleading visuals in brain imaging papers
- misstatements about neuroscience case histories
- molecular machinery
- morphogenesis
- Morris water maze
- multiple copies of a memory theory
- narrowness of neuroscientist studies
- natural selection
- near death experiences
- network neuroscience theory
- neural noise
- neuron nicknames
- neuroscience blogs
- neuroscience research endangering patients with brain problems
- neuroscientist confessions
- neuroscientist hand-waving
- neuroscientist pareidolia
- noise-mining
- non-local consciousness
- nonneuralism
- novelty preference technique
- opinion poll of neuroscientists
- optogenetics
- orchestrated objective reduction theory
- origin of biological complexity
- origin of man
- origin of Mind
- origin of minds
- out-of-body experiences
- overblown hype
- pain insensitivity
- panpsychism
- paranormal phenomena
- patient H.M.

Near-death experiences are one of the strongest lines of evidence against claims that the brain is the source of the mind. Contrary to the predictions of such claims, when brains have shut down during cardiac arrest (showing only flat lines in their electrical activity), minds often have long, vivid experiences -- not merely some type of experience, but experiences that people routinely report being more vivid than regular life experiences. And very vivid and detailed memories are formed. In near-death experiences people very commonly report perceiving their bodies from outside of their bodies, from meters away. There is no credible explanation of such reports under the assumption that the brain is the source of your mind and the storage place of your memories. Remarkably, the recent Guardian article is a very long article, and it kind of presents Borjigin's Patient One as its "star witness" for the claim that near-death experiences have a neural explanation. But as I show above, this is a farce, because the actual data of Patient One's death (shown in my second visual above) provides no support for the claim that near-death experiences have a neural explanation, and strongly supports one of the pillars of the claim that such experiences have no neural explanation: the claim that brains shut down when hearts shut down or a few seconds later.

A 2017 paper was "Electroencephalographic Recordings During Withdrawal of Life-Sustaining Therapy Until 30 Minutes After Declaration of Death." That 2017 paper studied the brain waves of four humans who died in Ontario, Canada after their hearts stopped. These were patients different from the four Michigan, USA patients whose deaths were documented in the 2023 Borjigin paper described above. Referring to the 2013 paper co-authored by Borjigin, the 2017 paper stated, "We also did not observe any well-defined EEG states following the early cardiac arrest period as previously reported in rats." Of course -- brain electrical activity stops when the heart stops, or only a few seconds later. The paper points out that "one must be careful about false positive EEG signals from muscular and/or cardiac sources." Motion and muscle activity shows up on EEG readouts, producing what are called motion artifacts. An involuntary muscle twitch (or a movement by a medical person of part of an unconscious body) a few seconds after death may show up as a blip on an EEG reading. Such a thing is no actual evidence of brain activity during conscious experience. A scientific paper commentary says, "Contamination of EEG recordings by muscle artifact is a well-recognized problem, especially in the high-frequency gamma range, leading to erroneous estimates of EEG spectral power and coherence (Goncharova et al., 2003; Pope et al., 2009; Fitzgibbon et al., 2013)." It is just such a false-alarm-prone gamma range that Borjigin's papers on this topic have been centered around.

Below is Figure 3 from the paper. In Patients 1, 2 and 3 there is no significant brain wave activity (as shown in the blue EEG lines) after the time point marked 0 (time of last heart beat). In Patient 4 the EEG lines flatline at five seconds after the heart stopped, and there is about 15 seconds later merely a weak blip or two around the time 20 to 30 seconds after the heart stopped, but that dies away after a few seconds.

- patient K.C.
- pharmaceutical industry influence on neuroscience
- philosophy
- philosophy of biology
- philosophy of mind
- Phineas Gage
- photographic memory
- physical shortfalls of all brains
- physicalism
- PKMZ
- PKMzeta
- place cells
- post-hypnotic amnesia
- pre-1975 near-death experience
- pre-1975 out-of-body experience
- precognition
- predicting intelligence from brains
- predicting psychology from brains
- predictions
- prefrontal cortex
- preservation of learned knowledge after hemispherectomy
- preservation of learned knowledge after loss of much of brain
- preservation of learned knowledge in animals after brain tissue loss
- protein turnover
- psychiatric mudslinging
- psychiatry
- psychical research
- quantum mechanics
- questionable research practices
- recall of 50-year-old memories
- recall of long texts
- recommended books
- redundant memory storage
- relative ease of getting a neuroscience PhD
- reliable techniques for measuring recall in rodents
- remote viewing
- replication crisis
- research abuse of epileptics
- savants
- science academia resemblance to organized religion
- science journalism
- scientific consensus
- scientific fraud
- scientist misconduct
- sequential traversal of neurons



In none of the eight patients graphed in these two papers do we have any substantive evidence of brains working for more than an instant after the patient's last heart beat.

The term "isoelectric" or iso-electric in reference to brain waves means a flat-lining equivalent to no electrical activity in the brain, as measured by EEG readings. The paper here states, "Within 10 to 40 seconds after circulatory arrest the EEG becomes iso-electric." Figure 1 of the paper here says that such an isoelectric flat-lining occurred within 26 seconds after the start of ventricular fibrillation, the "V-fib" that is a common cause of sudden cardiac death, with "cortical activity absent." Also referring to a flat-lining of brain waves meaning a stopping of brain electrical activity, another scientific paper says, "several studies have shown that EEG becomes isoelectric within 15 s [seconds] after ischemia [heart stopping] without a significant decrease in ATP level (Naritomi et al., 1988; Alger et al., 1989)." Another paper tells us this about brain waves and infarction (obstruction of blood flow), using CBF to mean cerebral blood flow, and the phrase "the EEG becomes isoelectric" to mean a flat-lining of brain electrical signals:

"*When normal CBF declines, the EEG first loses the higher frequencies (alpha and beta bands), while the lower frequencies (delta and theta bands) gradually increase. When the CBF decreases further towards an infarction threshold, the EEG becomes isoelectric."*

Similarly, another paper refers to blood pressure, and tells us, "When flow is below 20 mL/100 g/min (60% below normal), EEG becomes isoelectric." meaning that brain electrical activity flat-lines. The 85-page "Cerebral Protection" document here states, "During cardiac arrest, the EEG becomes isoelectric within 20-30 sec and this persists for several minutes after resuscitation." Another scientific paper states this:

"Of importance, during cardiac arrest, chest compliance is not confounded by muscle activity. The EEG becomes isoelectric within 15 to 20 seconds, and the patient becomes flaccid (Clark, 1992; Bang, 2003)."

You can find quite a few additional papers asserting that brains flat-line very quickly after cardiac arrest by doing Google or Google Scholar searches for the phrase "EEG becomes isoelectric" or "EEG becomes iso-electric."

Postscript: A recent scientific paper referring to EEG readings of brain waves states this:

"The trajectory of EEG activity following cardiac arrest is both well defined and simple. It consists of an almost immediate decline in EEG power, which

- sharp wave ripples
- short lifetime of synapses
- short lifetimes of brain protein molecules
- short lifetimes of dendritic spines
- simulation hypothesis
- so-called psychiatric brain surgery
- sociology of science
- source of thoughts
- speed of human minds
- speed reading
- Spiritualism
- split-brain operation
- stem cells
- strokes
- synapse theory of memory
- synapses
- synaptic mapping
- synaptic plasticity
- synaptic turnover
- T-maze
- teleospiritism
- telomeres
- terminal lucidity
- top-down theory of mind
- transhumanism
- transposition of senses
- traumatic brain injury
- unnecessary brain scans
- unreliability of synaptic transmission
- unreliable neuroscience techniques
- vaccines
- videos
- visual recognition
- Y-mazes

culminates in a state of isoelectricity [flatlining] within 20 s [seconds]."

The paper refers to three studies "where gamma oscillations are essentially or mostly artifactual and non-functional biorhythms masquerading as authentic EEG signals," noting how such oscillations can be produced by muscle movements. The paper concludes by saying this about Borjigin's blips: "Regardless of what the electrogenesis of the gamma spikes ultimately turns out to be, it is highly unlikely that they could be responsible for generating an NDE [near-death experience]."

at April 03, 2024 9 comments:

Labels: near death experiences, out-of-body experiences

Sunday, April 30, 2023

There Is No Evidence of a Neural Explanation for Out-of-Body Experiences

When neuroscientists or the mainstream press attempt to suggest natural explanations for near-death experiences or out-of-body experiences, we often get some bad examples of misstatements and inaccuracies. I discussed some of these misstatements and inaccuracies in my post "Misleading Claims in Attempts to Naturally Explain Near-Death Experiences and Out-of-Body Experiences." There was in a recent press article another case of a neuroscientist misspeaking about out-of-body experiences, claiming that neuroscientists have some understanding of what causes them. There is no mention of any new research, just a reference to one of the papers below. I will discuss below some of the main papers cited by neuroscientists claiming some evidence of a neural explanation for out-of-body experiences, and I will explain why they fail to show such a thing.

But first let me note that neuroscientists speaking on such a topic typically mislead us about the incidence of out-of-body experiences. For example, the neuroscientist mentioned above quotes an estimate that 5% of the population have out-of-body experiences, citing Susan Blackmore. But according to the paper here, "For example, from a selection of 321 individuals on the electoral register, 12% of respondents identified that they had experienced at least one OBE (Blackmore, 1984)." Below is a graph from page 185 of a paper on this topic, the paper "Out-of-Body Experiences" by Carlos S. Alvarado.

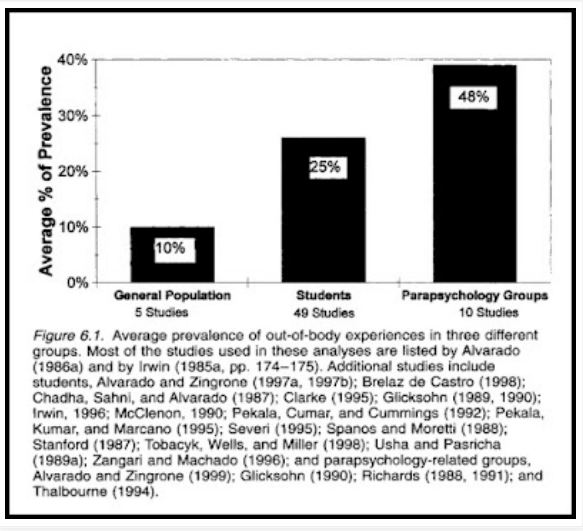


Figure 6.1. Average prevalence of out-of-body experiences in three different groups. Most of the studies used in these analyses are listed by Alvarado (1986a) and by Irwin (1985a, pp. 174–175). Additional studies include students, Alvarado and Zingrone (1997a, 1997b); Brelaz de Castro (1998); Chadha, Sahni, and Alvarado (1987); Clarke (1995); Glicksohn (1989, 1990); Irwin, 1996; McClenon, 1990; Pekala, Cumar, and Cummings (1992); Pekala, Kumar, and Marcano (1995); Severi (1995); Spanos and Moretti (1988); Stanford (1987); Tobacyk, Wells, and Miller (1998); Usha and Pasricha (1989a); Zangari and Machado (1996); and parapsychology-related groups, Alvarado and Zingrone (1999); Glicksohn (1990); Richards (1988, 1991); and Thalbourne (1994).

Surveys of the general public have found 10% having out-of-body experiences; surveys of students have found 25% having out-of-body experiences; and surveys of parapsychology groups have found 48% of the persons reporting out-of-body experiences.

As another preliminary, let me mention the unreliability of second-hand accounts of unusual experiences. I may put accounts of unusual experiences in three categories.

- **Lowest quality:** accounts that are entirely second-hand, without including any quotations from the person having the experience, particularly if such accounts are responses to questions not quoted, which may have been leading questions.
- **Medium-low quality**: accounts that are second-hand, but include fragmentary quotations of words or phrases used by the person having the experience (with the quality being low not medium if the answers were responses to leading questions).
- **High quality**: accounts consisting of paragraphs or contiguous sentences stated by an observer, which were not responses to leading questions.

Here is an imaginary example of some very low-quality evidence, one in which we have a leading question in the middle:

Dr. Fictional: *Here try on these special "wrong prescription" glasses that are for people three times more nearsighted than you.*

Miss Hypothetical: *Oh my goodness! My perception is all scrambled!*

Dr. Fictional: *So is it kind of like you're out of your body?*

Miss Hypothetical: *Well, hmm, I guess you might say it's a* **bit** *like being out of my body.*

Dr. Fictional: *Okay, I'm recording you said it was "like being out of my body."*

Below are some of the main papers cited by neuroscientists claiming a neural explanation for out-of-body experiences.

- "**The Experimental Induction of Out-of-Body Experiences**." This paper has an inaccurate title, as nothing like an like out-of-body experiences was induced. The paper describes some artificial hi-tech setup in which people wearing goggles like virtual reality goggles watch video footage of their body produced by a video camera behind them. Anyone wearing such goggles would know he was experiencing some virtual reality setup, and such an experience would not match those reported by those having out-of-body experiences. The paper does nothing to show any neural explanation for out-of-body experiences.
- "**Out-of-body experience and autoscopy of neurological origin**." This 2004 paper cites six cases of people with some kind of neurological problem, usually partial seizures, but in one case migraine headaches. The paper tries to get us to believe that these six people had out-of-body experiences. Problematically, we fail to get any first-hand full-sentence accounts from these people

consisting of quotes that are one or more sentences long. The accounts are second-hand accounts of their experiences, made by the paper authors, who may have been motivated to make the accounts sound like out-of-body experiences. We get mere sentence fragment quotations from the subjects. In general, second-hand accounts of someone else's unusual psychic experiences are not reliable. Although the authors claim that four of these supposed out-of-body experiences were caused by partial seizures, we have no way of knowing whether that it is correct. We have no way of knowing whether the experiences reported were things that took place during any medical incident such as a seizure. Since out-of-body experiences are extremely common, and since partial seizures are also common (occurring to about 1% of the population), a few reports that might be out-of-body experiences coming from people who sometimes suffer from partial seizures does nothing to show that the partial seizures caused the out-of-body experience. The only reliable way to verify that an out-of-body experience might be caused by partial seizure would be to get something like a video of someone describing an out-of-body experience while they were hooked up to an EEG machine that showed brain waves that characterize a partial seizure. The authors have done no such thing. The authors failed to do anything to show that the supposed out-of-body experiences occurred while the partial seizures occurred.

- "**Stimulating illusory own-body perceptions**." This 2002 paper has some quotes by a subject in whom the authors had brain-zapped with electricity, by inserting electrodes in her brain. The authors have attempted to portray this as evidence of an artificially induced out-of-body experience. But the only sentence that the paper quotes from the subject is one that does not indicate a full out-of-body experience. That sentence is this: "I see myself lying in bed, from above, but I only see my legs and lower trunk." That sounds like some weird electricity-induced perception anomaly that is not properly described as an out-of-body experience. During an out-of-body experience a person will typically report leaving his body and seeing his entire body (not just the legs and lower trunk) from outside of the body. Eager to report some experimental induction of an out-of-body experience, our authors seem to have taken some account that does not match those of out-of-body experiences, and called that an out-of-body experience. The authors make this claim: "Two further stimulations induced the same sensation, which included an instantaneous feeling of 'lightness' and 'floating' about two metres above the bed, close to the ceiling." Since this is not an actual full-sentence quote from the subject, it has very little value as evidence. A second-hand account of a person's weird experience during brain zapping (by some other person who did not have that experience) is pretty worthless as evidence. What would we have read from a transcript of what the subject said, one including any questions the subject was asked? We have no idea.
- ***"The Out-of-Body Experience: Disturbed Self-Processing at the Temporo-Parietal Junction."*** The authors of this 2005 paper cause us to lose confidence in their credibility on this topic when they state, "OBEs have been observed predominantly in

patients with epilepsy and migraine." This statement is not at all correct. The authors try to justify it by saying this as their next sentence: "Thus, Lippman (1953) reported two migraine patients with OBEs, and Green (1968) reported that 11% of the OBE subjects that participated in her survey suffered from migraine headaches." Any person who seriously studied out-of-body experiences would have found out that surveys report them occurring in significant fractions of the human population, and might realize the folly of trying to justify a claim that out-of-body experiences are caused mainly by migraines or epilepsy by citing a mere two patients having migraines and out-of-body experiences. And anyone writing carefully would have realized the folly of trying to justify a claim that *most* out-of-body experiences are produced by migraines or epilepsy by citing some person claiming that *merely 11%* of some group of people having out-of-body experiences had migraines. Trying to claim that out-of-body experiences are largely caused by migraine headaches makes no sense. In a book about near-death experiences and out-of-body experiences (OBEs), Dr. Peter Fenwick states, "A prominent feature of OBEs is that pain is entirely absent." But since migraine headaches are episodes of intense pain, it makes no sense to claim they are the cause of painless out-of-body experiences. The paper presents no original reports or original experimental research, and does nothing substantive to back up a claim that out-of-body experiences are caused by "disturbed self-processing at the tempero-parietal junction." The Figure 3 we see in the paper (a brain image based on scans of only three subjects) will seem very laughable to anyone familiar with the requirements for robust evidence in brain scanning correlation experiments, which is an absolute minimum of 15 subjects per study group and the following of a detailed, careful blinding protocol. In fact, now experts tell us that *thousands* of subjects are needed for reliable results in brain scan studies trying to establish correlations. Scientists have no understanding of how a sense of self could possibly arise from neural activity, so anyone talking about a "disturbed self-processing at the tempero-parietal junction" is simply engaging in empty jargon-decorated hand waving.

- **"Voluntary out-of-body experience: an fMRI study."** This 2014 paper documents an fMRI brain scan of a woman who claimed to be able to have an out-of-body experiences at will. Nothing unusual is reported in the fMRI results. We have one of those brain scan visuals that show particular parts of the brain in bright colors. But this means nothing, because it is well known that innumerable neuroscientists show such visuals when they do fMRI scans showing only differences of only about 1 part in 200 or 1 part in 500. The authors report no brain pathology in the individual, and don't report getting anything that they don't see from a typical brain scan.
- **"Mind's Eye: a Case of Out-of-Body Experiences"**: We have a case report of a woman claiming 3 out-of-body experiences in the past six months during nighttime awakenings. She gives this account: *"I see myself as if I was from an airplane and looking down at a distance of about five feet. I feel split and I see myself down. I have my body down, I'm not in my body, I'm out of my*

body. My mind sees my body, I see the shape of my body. The part of mine that is over…it seems strange to me looks like an angel, an entity. I see the body there but I'm like air…". The authors refer to these accounts as "hallucinatory experiences," but do nothing to back up such claims. Their explanation is a feeble one. They state, "The interesting aspect of this case report is the occurrence of OBEs, likely triggered by the frequent night awakenings." There is no reason why waking up at night would cause someone to have an experience of being out of their body. The authors offer nothing but a little speculative jargon as an explanation, stating this: "It is possible that this situation could facilitate hallucinatory experiences of self as a result of two components: (1) insufficient neurofunctional integration and lack of binding information from different neural networks responsible for the perception of one's own body as an integral part of psychophysical self-awareness, and (2) the instability of psychophysiological arousal with rebound both on the maintenance of sleep and mental activity." Such a statement is merely empty hand-waving. They fail to offer any evidence of any pathology or unusual brain state that could explain the reported out-of-body experiences.

- "**Altered neural dynamics in people who report spontaneous out of body experiences**." This 2019 study got 551 paper to fill in a questionnaire about out-of-body experiences, and found that 24% of them reported at least one out-of-body experience. The authors got EEG readings from 19 people who claimed to have an out-of-body experience, and 21 people who did not make such a claim. The paper provides no good evidence of any different neural dynamics in the subjects who had an out-of-body experience, and its title is inaccurate. Referring to some tiny difference involving less than a second, the authors claim "amplitude of the visual P1 ERP deflection and consistency of alpha-band phase locking were significantly reduced in the participants who had had an OBE," but that "we did not find any group differences in resting state power or in visually induced gamma oscillations. " The reported difference is a minuscule difference that anyone could have found when comparing brain waves between any two random groups of twenty subjects, and trying to find some difference between them. Look at Figure 2 of the paper, which shows the supposed differences. It shows two little one-second blips (one from the OBE group, the other from the control group), and the blips are almost exactly the same shape. The authors should have been ashamed to have passed that off as evidence of "altered neural dynamics." Ditto for figures 3, 4 and 5. No study like this should be taken seriously unless (1) is a pre-registered stating some specific hypothesis to be tested; and (2) is a study that follows a rigorous blinding protocol, so that people analyzing the EEG waves do not know from which group a particular set of waves comes from. This study was not a pre-registered study, and did not follow any blinding protocol. No robust evidence has been found of brain differences between the two groups.
- "**Astral Projection: A Strange Out-of-Body Experience in Dissociative Disorder**." We have here a 2021 paper mentioning a

report by a teenager of an out-of-body experience. The paper provides no evidence of any brain pathology. We read that "his medical history was negative for symptoms of epilepsy, migraine, syncope, cerebrovascular accident, neurological deficit." We read that "Electroencephalography (EEG) did not reveal any abnormality," and that a "CT scan of the brain did not show any pathological findings." The teenager was from a troubled family, having no mother and a harsh father, and had run away from home several times. Apparently based on his report of having had an out-of-body experience, some psychiatrist labeled the teenager as having "dissociative identity disorder and dissociative fugue." Excluding a vague one-sentence reference to the patient "assuming the identity" of some 18-year-old electrician (which may or may not be a reference to a mere lie by a runaway), no evidence is given for this diagnosis other than the teenager's report of a very common psychic experience: an out-of-body experience. A test indicated "no psychotic features." No evidence has been provided for any neural or psychological cause for the reported out-of-body experience. The paper provides no clear and sound-seeming evidence to back up the claim that the teenager had "dissociative identity disorder."

- "**Neurophenomenology of Out-of-Body ExperiencesI Induced by Hypnotic Suggestions**." In this study 15 people were either asked to imagine having an out-of-body experience, or were hypnotized and told they were having an out-of-body experience. EEG readings were taken of the subject's brain waves while this occurred, but the study reports a "lack of significant EEG differences" between the subjects that were hypnotized and not-hypnotized. Since no convincing evidence is given that any of these people actually had an out-of-body experience, and since no comparison was made between the EEG readings and those of control subjects, no evidence is actually provided of a "neurophenomology of out-of-body experiences." The authors have done nothing to back up their claim that "our results show that OBEs can be easily inducible in hypnosis." It is well-known that people are extremely suggestible under hypnosis, so mere OBE claims of hypnotized subjects told to have an out-of-body experience is no evidence that such experiences occurred to such persons.
- "**Out-of-body experience, heautoscopy, and autoscopic hallucination of neurological originImplications for neurocognitive mechanisms of corporealawareness and self consciousness.**" This is a review article case that has a graph (Figure 3B) trying to give you the impression that large fractions of people experiencing out-of-body experiences have brain lesions. The graph is misleading, and the vast majority of people having out-of-body experiences have no such lesions. The graph was made using 11 cases of out-of-body experiences that the authors have cherry-picked, presumably with an interest in finding people with brain lesions who reported out-of-body experiences. This is cherry-picking, because there are many thousands of documented cases of out-of-body experiences reported by people without brain lesions.

- "**Visualizing Out-of-Body Experience in the Brain**." The authors claim that they produced an out-of-body experience by zapping someone's brain with electrodes that had been implanted in his brain to treat tinnitus. The claim is not well-established, as the authors have not provided any quotes from the subject which sound like something someone would say when having an out-of-body experience. The authors state, "His perception of disembodiment always involved a location about 50 cm behind his body and off to the left." 50 centimeters is about 19 inches, about an arm's length. In out-of-body experiences, people don't report being an arm's length behind their body, but typically report seeing their body from meters above it, often reporting a viewpoint of being on the ceiling. Since the perceptual experience of this paper's subject was produced through brain zapping of a type not done to people having out-of-body experiences, and since we have no testimony from the subject matching that of typical out-of-body experiences, the paper does nothing to help show a neural basis for out-of-body experiences.
- "**Linking Out-of-Body Experience and Self Processing to Mental Own-Body Imagery at the Temporoparietal Junction.**" We hear that eleven subjects "were asked to make right–left judgments about a schematic human figure after having imagined themselves to be in the body position of the figure and to have its visuospatial perspective." We have the most absurd assertion that the "volunteers' transformation of their own bodies into the body position of the front-facing figures (as compared with the back-facing figures) mentally simulates the body position and the visuospatial perspective that is experienced during OBEs." No, the weird little exercise described did not do anything to simulate what is experienced during out-of-body experiences. The brain state analytics that follow in the paper are irrelevant, because whatever imagination was occurring in the subjects does not watch the mental experiences of people having out-of-body experiences.
- "**Out of body experiences and their neural basis.**" This article presents no original research, and fails to discuss any good evidence for a neural basis for such experiences. The author says "out of body experiences occur in about 10% of the population," and then claims "the importance of vestibular and multisensory mechanisms in out of body experiences was underlined by their occurrence in several patients with such experiences," apparently failing to see the absurdity of trying to explain something occurring to many *millions* of people by claiming that "*several*" of such people had some "vestibular" issue (which is like trying to show that space travel is the cause of heart disease by mentioning that "several" astronauts had heart disease). Then we have a reference to the faulty "Out-of-body experience and autoscopy of neurological origin" discussed above.
- "**The body unbound: Vestibular–motor hallucinations and out-of-body experiences":** This study merely consisted of gathering and analyzing questionnaire data. The authors then do some elaborate statistical rigmarole (including "a series of stepwise multiple regression analyses") designed to show their data is compatible with speculations about neural causes for out-of-body experiences. Since the study is not a pre-registered study, and did

not follow any blinding protocol, it seems yet another case of the extremely wide phenomenon of scientists playing "make up your procedure as you go along" and "keep torturing the data until it confesses." The authors knew nothing about the brain states of the people who answered their questions. They mainly just claim "consistency" with speculation of other scientists, rather than supporting evidence.

- "**Out-of-Body Experiences in Schizophrenia: A Questionnaire Study**." This survey study found "when the OBEs are distinguished on the basis of the descriptions given, into typical OBEs, in which the person seems to leave the body, and pseudo-OBEs, which include all sorts of other experiences, then...it seems that the schizophrenics do not have significantly more OBEs than do control subjects and that having OBEs is not related to either perceptual distortions or to the symptoms of schizophrenia."
- "**Cognitive correlates of the spontaneous out-of-body experience (OBE) in the psychologically normal population: Evidence for an increased role of temporal-lobe instability, body-distortion processing, and impairments in own-body transformations.**" This was a survey study that asked students about whether they had ever had an out-an-body experience, and also asked questions designed to elicit evidence that the users might be hallucination-prone or have some brain problem. Subjects were given a CAPS survey that can supposedly find evidence of "temporal love instability." The authors claim to have found that those reporting out-of-body experiences scored higher on this CAPS survey than control subjects having no out-of-body experiences, and higher on an LHSH survey designed to find evidence of hallucinations. Unfortunately in section 3.3 we learn that the number of surveyed subjects having real out-of-body experiences was a mere 6. First we are told that "of the 63 participants who took part in this study, 17 of these (26%) claimed to have experienced at least one OBE at some point in their life," but then we are told "Of the OBE group, only six (35%) reported seeing their own body or some form of body representation of the physical self during the OBE, with all the others reporting only the shift in perspective (either visually, as a bodily sensation, or both)." Is six subjects an adequate sample size from which to be judging a greater tendency of any sort? Certainly not. If the authors had done a sample size calculation like good experimental scientists, they would have have found their relevant sample size (six subjects) was way too small to produce any reliable result on a survey of this type; but they failed to do such a calculation. The same shortfall is a problem that occurs in a very large fraction of all neuroscience and psychology studies. Because a way-too-small study group size was used (only six subjects), the authors have not provided any reliable evidence of anything.
- "**Out-of-Body Experiences, Dreams, and REM Sleep**." The authors "tested an explanatory model of OBEs as a form of dreaming." Their Study 1 is irrelevant, involving only a tiny sample set from five people. Their Study 2 analyzed questionnaires from 604 subjects, 136 were readers of a newsletter about lucid dreaming research. After statistical fiddling involving multiple regression, the authors report "Subjects in the current study who

reported lucid dreams were 158% more likely to report OBEs than subjects who did not report lucid dreams." But since their subject pool had so many people interested in lucid dreaming (those 136 people who were readers of a newsletter on the subject), we did not have a random sample of the public from which anything can be reliably deduced. And what question was asked to judge whether someone had an out-of-body experience? We don't know, because the authors didn't tell us, and didn't publish their questionnaire. As a result, we can't tell whether this research showed anything. The idea that out-of-body experiences can be explained as dreaming is not credible, and cannot explain the most prominent examples of such experiences, occurring during close brushes with death when people are not dreaming.

- "**A putative implication for fronto-parietal connectivity in out-of-body experiences**." We have a study in which some task is given to both people who had an out-of-body experience and those who did not. But the number of subjects who did this task and are claimed as having an out-of-body experience is only eleven subjects, too small a study group size for any kind of reliable result. The study lists the reports of these eleven people, and several of the reports should have been excluded because their accounts don't sound like typical out-of-body experiences (with no reported perception of the body from outside of the body). But the authors have failed to exclude these subjects from their pool of 11 people supposedly reporting out-of-body experiences. The data gathered from this poorly-designed study does nothing to justify the weak claim of its authors that their data "suggests that OBEs might be mediated by a functional disconnection of information between the PFC and the TPJ." The authors have presented no good evidence that "fronto-parietal connectivity" has anything to do with out-of-body experiences. The authors were looking for some performance difference in some weird task they devised, but do not report any convincing evidence of such a difference (data-dredging their way to some little difference somewhere of only $p < .03$, which is very unimpressive with a study group size this small).
- "**Out-of-body experiences associated with seizures**." The paper does not attempt to suggest seizures are an explanation for out-of-body experiences (which almost all occur in people who do not have epilepsy). The paper finds reports of previous out-of-body experiences in 7 out of 100 people having seizures. We read, "The finding that 6 of the 7 patients who reported out-of-body experiences associated with seizures described them as occurring only once or twice many years ago raises the question of whether those experiences were truly seizure-related."
- "**Surge of neurophysiological coupling and connectivity of gamma oscillations in the dying human brain.**" Here we have another misleading use of the word "surge" in a science paper headline, a paper co-authored by one of the researchers (Jimo Borjigin) who authored the equally mistitled rat study "Surge of neurophysiological coherence and connectivity in the dying brain." The paper merely describes a little brain activity in two people after a respirator was turned off, with no evidence of brain activity continuing for more than a few seconds after the heart has

stopped. The lines on brain waves charts go up and down, and there are seven or so channels of brain waves (including a gamma channel); so at any second you can usually find some little line going up and call that a "surge," although at the same time other lines (representing other brain wave channels) will probably be going down. Using the term "surge" in the title of the paper was misleading, rather like tracking the price of Microsoft, seeing it go up 2% at 2:00, and calling that a surge. The authors of the study did not even report a surge in gamma waves, one of the brain wave channels. Eager to get something they could call a surge, the authors got their little "surge" after some statistical fiddling with the signals, to get some statistical measure that only shows up after arbitrary analytics. Almost any random ten seconds of brain wave activity can be statistically analyzed to show a little "surge" somewhere, if you're willing to dredge up secondary statistical measures. Keep torturing the data, and it will confess as you wish. Shamefully, the journal Science has an article on this paper with the misleading headline "Burst of brain activity during dying could explain life passing before your eyes"; and the Smithsonian site has an equally misleading click-bait headline of "Surging Brain Activity in Dying People May Be a Sign of Near-Death Experiences." There is no evidence that either of these two people had an experience of "life passing before their eyes" or anything like near-death experiences. The subjects were unconscious when the respirator was turned off, and there is no evidence of any consciousness. Unconscious people have gamma wave activity (the activity reported), and you have plenty of gamma activity while you are sleeping. No "neural correlates of the NDE" were reported by the paper. As two MDs point out in a commentary on this paper, "The researchers reported no evidence whatsoever that these brain activities were correlated with conscious experiences in those two patients—and no reason to compare these results with prospective NDE studies in patients who have survived a cardiac arrest." To get the real truth of what was happening here, you need to open up the supplemental information document of the paper. The visuals in that document show the brain waves of the patients all dying off to become a flat line by the time the hearts of the patients stopped. As I explain in my post here, such visuals contradict claims that the paper does anything to support a neural explanation for near-death experiences. In that post I discuss some misleading or totally unwarranted claims made by one of the authors of this paper.

- "Causal evidence for the processing of bodily self in the anterior precuneus." An NPR story has a bogus headline about this study: "Having an out-of-body experience? Blame this sausage-shaped piece of your brain." The study involves people who had some region of their brain called the anterior precuneus zapped by electrodes implanted in their brains. But the abstract of the paywalled study does not mention any out-of-body experiences produced by such artificial manipulations, so the NPR headline is unwarranted. And no such study could ever explain out-of-body experiences arising in people who do not have electrodes implanted inside their brains. See my post "This Brain-Zapping Bungled Mess Sheds No Light on Out-of-Body Experiences" here for a

detailed discussion of the flaws of this study. The main flaw is that the experimenters repeatedly asked "leading" questions of people who were having their brain zapped, questions that seemed designed to get from them some quote sounding a little like an out-of-body experience, questions such as, "Did you feel any floating?" In a proper study of this type, subjects would only be asked neutral questions such as "tell me how that feels," or maybe "can you tell me more about that" after a subject had given some description. After reviewing all of the observer responses stored in a spreadsheet available with the original paper, I wrote " None of the patients reported anything that can be accurately described as an out-of-body experience." I also list in that post four cases in which the paper authors inaccurately described what their subjects reported.

- "Near-Death Experience as a Probe to Explore (Disconnected) Consciousness." The lead author is Charlotte Martial. The paper very badly mischaracterizes near-death experiences. It has a 3D chart in which a near-death experience is depicted as a state of the *lowest* wakefulness and the *lowest* connectedness. But contrary to such a description, it has been massively reported by those having near-death experiences that they had a super-high state of wakefulness and a super-high state of connectedness, with the description "realer than real" sometimes used. The paper makes the extremely inaccurate statement that "no empirical study has confirmed that NDEs include some real external events." To the contrary, very many accounts of near-death experiences have discussed people describing details of the real world (including real events) during out-of-body experiences, events and details they should not have been able to have known about during some state of unconsciousness or cardiac arrest occurring during their near-death experiences. Many such accounts are described in my post here.
- "A Neuroscientific Model of Near-Death Experiences." See my post here for a very long discussion of the flubs and fallacies in this paper by Charlotte Martial and others. The post is entitled "Physically Unrealistic NEPTUNE 'Model' of Near-Death Experiences Is a Misleading Mishmash." Martial has centered her paper around the speculation that surges in dopamine levels occurring during cardiac arrest might produce hallucinations causing near-death experiences. I point out why this speculation is untenable, given that brains very quickly electrically shut down during cardiac arrest, reaching a flat-line state of asystole within 10 or 20 seconds after the heart stops. I also point out that there have been two experiments in which human subjects were infused with dopamine, causing their dopamine levels to rise by very many times, up to 1000 times (a percentage increase of 10000%). Neither of the papers describing such experiments reported that any hallucinations were produced. The papers are those here and here. In my discussion I point out why a paper by Martial claiming to have found "higher fantasy proneness" in those having near-death experiences did not show any such thing.
- **"Out-of-Body Experiences and Hallucinatory Experiences: A Psychological Approach."** This study involved having hundreds of students fill out questionnaires. One question was used to judge

whether the subjects had ever had an out-of-body experience, and other questions were used to produce scores rating some nebulous concepts such as "fantasy proneness" and "schizotypy" (the latter a notoriously slippery psychological term). The authors claim psychological differences in those having out-of-body experiences. Unfortunately the study is invalid because it failed to use a proper question to judge whether the subjects had ever had an out-of-body question. Asking a question that might have been answered "yes" by anyone having a vivid dream or a vivid travel recollection or a vivid star-gazing experience, the question used was, "Have you ever had an experience in which you felt that 'you' were located 'outside of' or 'away from' your physical body, that is, the feeling that your consciousness, mind or awareness was at a different place from your physical body?" A proper question asking about out-of-body experiences would have asked whether the person had perceived his body from a position outside of his body or had an experience of leaving his body. The authors have not done anything to show any neural basis for out-of-body experiences. Contrary to the insinuations of such a paper, we read the following in another paper:

"*Measures of traits and symptoms related to psychosis have failed to differentiate OB [out-of-body] experients from nonexperients (Gabbard & Twemlow, 1984; Irwin, 1980; McCreery & Claridge, 1995). McCreery (1993) found no relationship between the occurrence of OBEs and his participants' psychiatric histories. Gabbard and Twemlow (1984) concluded that 'the OBE group was significantly healthier than a variety of other normative groups in the population and did not have the constellation of symptoms often equated with character disorders, such as psychosomatic disorders, alcohol and drug abuse, or stimulus seeking' (p. 32)*"

It is rather clear from these examples that the body of neuroscience studies attempting to find evidence of a neural explanation for out-of-body experiences is mainly a swamp of junk science, characterized massively by misleading claims, empty hand-waving, poor study designs, irrelevancies and questionable research practices. Nowhere in such studies can we find any credible neural explanation of why anyone would ever report seeing their body from a position meters above their body, as we so often hear in reports of out-of-body experiences. Nowhere in such studies do we find evidence that out-of-body experiences are hallucinatory, and one of the studies above suggests such experiences are not reported more often in the main group having hallucinations (schizophrenics). In general the body of neuroscience studies attempting to find evidence of a neural explanation for out-of-body experiences can be described as hand waving decorated by neuroscience jargon and some weak poorly designed experimentation. When experimentation is involved, it is typically irrelevant or having too few subjects to be evidence for anything. The recent claim by a neuroscientist that scientists are starting to understand a neural cause of out-of-body experiences was one of the very many groundless boasts made by scientists.

If you were to ask someone two hundred years ago to imagine the strongest evidence he could get that his mind is not produced by his brain, such a person might have answered that it would be observing his body from outside of his body. Out-of-body experiences are one of the strongest types of evidence against claims that the mind is the product of the brain (or the same as the

brain). The failure of neuroscientists to even "get to first base" in credibly explaining such experiences as brain activity is a failure that "speaks volumes" against such claims.

If the authors of the papers mentioned above were to do a deep and thorough study of reports of out-of-body experiences (which they almost all fail to do), they would discover massive evidence further discrediting their speculations: evidence such as very many reports by people during out-of-body experiences of discovering things they never first learned about through normal sensory experience (see here for examples), and very frequent reports of unprecedented perceptual abilities during such out-of-body experiences. A very big difference between most such authors and myself is that I have very massively studied books and papers written by those holding a materialist or mainstream viewpoint on the brain (as shown by thousands of links to such papers and books on this site), but most such authors have failed to decently study the massive literature documenting evidence for the paranormal, doing no more than a cursory "sometimes briefly wade their feet in the water" kind of looking at such literature. My approach has been to massively study what is claimed to defy my view about the mind and brain (along with the opposite type of evidence), but few neuroscientists take so balanced an investigative approach. Neuroscientists prefer a "don't rock my own boat" approach of not seriously studying evidence that seems to defy their beliefs about brains. In general we should not regard people taking such an approach as thorough scholars of human mental phenomena.

at April 30, 2023 5 comments:

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Saturday, December 10, 2022

30 Things That Would Never Occur If Prevailing Neuroscientist Dogmas Were True

Let us look at some things that we should never expect to occur if the prevailing dogmas of neuroscientists were true, but which do actually occur.

Item # 1: Instant Memory Formation

The simple fact that humans can form complex new memories instantly is incompatible with the claim of neuroscientists that memories form by "synapse strengthening" or by the "alteration of neural connection patterns." If that were how humans formed memories, then the formation of a new memory would be a very sluggish affair, requiring many minutes or hours. "Synapse strengthening" or the "alteration of neural connection patterns" would require the synthesis of new proteins, which takes quite a few minutes or hours. But it is a very obvious fact of human experience that humans can form permanent new memories instantly. For example, you don't need to see a movie three or four times before being able to describe its plot exactly. You can tell someone the plot of a movie days after you have seen it the first time, even if you never thought of the movie during the days following your first viewing of it. And if someone fires a gun near your head, it won't take minutes for you to form a permanent new memory of this event; you'll get such a memory instantly.

The discrepancy between reality and neuroscience dogma is shown by the repeated occurrence of absurd lies in neuroscience literature in which it is claimed that forming a long-term memory requires "hours or days." For example, one recent neuroscience paper claims, "The initial process of long-term memory formation...occurs on a time-scale of hours to days." Nonsense; each of us can form permanent new memories instantly. New York City residents my age didn't need "hours or days" to form a permanent new memory of the fact that one of the World Trade Center towers had fallen. We got a permanent new memory of the fact the instant we heard it.

Item # 2: Instant Memory Recall

Let's consider a simple case. You hear the name of a movie star. You then instantly recall what that person looks like, and see a faint image of that person in your “mind's eye.” But how could this ever happen, if the memory of that person is stored in some particular part of your brain? In such a case, you would need to know or find the exact place in the brain where that memory was stored. But there would be no way for your brain to do such a thing. It would be like trying to find one particular needle in a skyscraper-sized stack of

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- Why We Should Not Think the Human Brain Can Store Very Old Memories
- Why the Instantaneous Recall of Old Memories Should Be Impossible for a Brain
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- Reasons for Doubting a Brain Could Do the Super-Complex Encoding Needed to Neurally Store Episodic Memories or Concepts
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- Study Finds No Correlation Between Number of Neurons and IQ
- The Many Cases Showing a Person's Mind Can Operate When His Brain Has Shut Down

needles. Exactly the same problem arises in trying to explain how a person could recall a sentence of relevant information when given a one-word prompt, as in these cases:

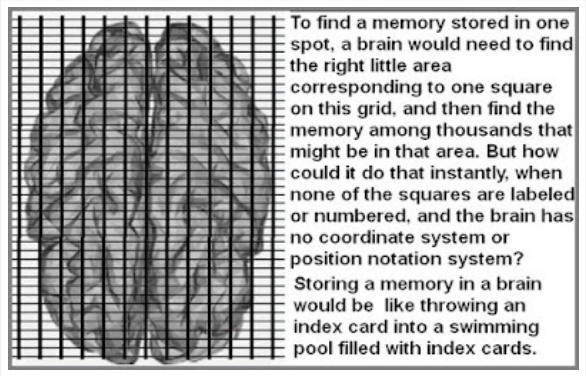
John: *Waterloo?*

Jane: *That was the final battle bought by the French emperor Napoleon Bonaparte, in which he was defeated.*

John: *Dickens?*

Jane*: Charles Dickens was a very popular 19th century British novelist who wrote classics such as "David Copperfield," "Oliver Twist," and "A Christmas Carol."*

Such common cases of instant memory recall should be impossible if memory is being retrieved from the brain. Humans know from their experience with books and computers what things are needed to allow instant retrieval to occur from physical systems. They are things such as addressing, sorting and indexing. No such things exist in the brain. Neither brain cells nor synapses have any type of addressing or indexing that might make possible instant recall.


To find a memory stored in one spot, a brain would need to find the right little area corresponding to one square on this grid, and then find the memory among thousands that might be in that area. But how could it do that instantly, when none of the squares are labeled or numbered, and the brain has no coordinate system or position notation system?
Storing a memory in a brain would be like throwing an index card into a swimming pool filled with index cards.

Item #3: Telepathy Outside of the Laboratory

The existence of telepathy outside of the laboratory is an extremely common human experience that would be recognized by many times more people were it not for the fact that materialist scientists have senselessly discouraged people from testing such an ability using their own families and friends. Researcher Louisa Rhine documented very many cases of telepathy outside of laboratory settings, in her book *Hidden Channels of the Mind*, which may be read here. Sally Rhine Feather documented very many other cases of telepathy outside of laboratory settings, in her book *The Gift: ESP, the Extraordinary Experiences of Ordinary People*, which can be read here. I personally have had many dramatic experiences showing the reality of telepathy, which I describe in posts such as this post and this post. Every case of telepathy is utterly incompatible with the prevailing dogmas of neuroscientists. If your brain is what is making your mind (or the same thing as your mind), telepathy should be impossible. The utter incompatibility of such claims about the brain and reports of telepathy are why neuroscientists senselessly refuse to acknowledge nearly two hundred years of massive evidence for telepathy.

Item #4: Out-of-Body Experiences

- A Soul Might Explain Instincts, but DNA and Brains Cannot
- Five Hallmarks of an Information Storage System (None of Which Your Synapses Have)
- Your Physical Structure Did Not Arise Bottom-Up, So Why Think Your Mind Did?
- Why a "Mechanical Memory" Theory Does Not Work
- The Brain Seems to Have No Mechanism for Reading or Writing Memories
- No One Understands How a Brain Could Generate Ideas
- Prevailing Brain Dogmas Cannot Explain Hypnotic Phenomena
- 30 Reasons for Rejecting the Theory of Neural Memory Storage
- Common Experiences That Show the Untruth of Professorial Memory Claims
- Neuroscience Research Customs Guarantee an Abundance of Junk Science
- Groupthink and Peer Pressure Make It Taboo for Neuroscientists to Put Two and Two Together
- The Social Construction of Eager Community Mirages
- Preprint Server Counts Suggest Engrams Are Not Really Science
- Engrams Are Touted Like Phlogiston Was Once Touted
- Synaptic Delays Mean Brain Signals Must Move at a Snail's Pace
- Raven Smarts Defy Prevailing Brain Dogmas
- No One Can Credibly Explain Why a Brain Would Store a Memory in One Specific Spot
- Brain Dogmas Versus Case Histories That Refute Them
- Inaccurate Titles and Misleading Citations Are Common in Science Papers
- In Neuroscience Papers Bluffing Is More Common Than Candor
- Young Age of Languages Contradicts Claims of Neural Storage of Linguistic Information
- Vacillating Disarray of the Memory Trace Theorists
- Study Finds "Poor Overall Reliability" of Brain Scanning Studies
- "Brains Store Memories" Dogma Versus the Reality of Noisy Brains
- The Brain Has Nothing Like 7 Things a Computer Uses to Store and Retrieve Information

Out-of-body experiences are a perfect example of an experience no one should ever have if prevailing neuroscientist dogmas were true. In an out-of-body experience someone reports being outside of his body. In a large fraction of all out-of-body experiences, a person reports observing his body from some position one meter or more away from his body. Such experiences simply should not occur if your brain is the same as your mind, or if your brain was creating your mind. Under such dogmas, a person should be permanently trapped in his body, and should never be able to observe his body from outside of his body. Instead of never occurring as predicted by prevailing neuroscience dogmas, out-of-body experiences are quite common. A scientific survey of a group of hospital patients found that 10% of patients with cardiac arrest had a near-death experience (NDE), with 19 of these 27 patients who reported an NDE reporting an out-of-body experience (OBE). A different study found that "Of the 30 interviewable survivors of cardiac arrest, 7 (23 percent) described experiences classified as NDEs by scoring 7 or more points on the NDE Scale." Of these reporting a near-death experience in this study (11), 90% reported out-of-body experiences. A Dutch study found 18% of cardiac arrest survivors reporting a near-death experience, but with only a minority of these reporting an out-of-body experience.

Item #5: The Recitation of Very Large Bodies of Memorized Information

A person familiar with common theatrical productions will know of some cases in which people memorize very large bodies of information. For example, to play the role of Hamlet, an actor must memorize 1,422 lines, and to play the role of Richard III, an actor must memorize 1,124 lines. Similar demands on memory are made by the Wagnerian singing roles of Tristan and Siegfried, the latter requiring a singer to sing for most of three solid hours. But such well-known feats of memory recall are dwarfed by various lesser-known examples. According to the site of the Guinness Book of World Records, Rajveer Meena memorized pi to 70,000 digits, reciting those 70,000 digits without any errors. Lu Chao memorized pi to 67,000 digits. Below is a quote from page 53 of the book *The Mind and Beyond* published by Time-Life Books:

"As reported in the 1990 edition of the Guinness Book of World Records, in 1967, one Mehmed Ali Halici of Turkey recited from memory 6,666 verses of the Koran in six hours. And in 1989, Englishman Tony Power memorized in correct order a random sequence of thirteen packs of shuffled playing cards – 676 cards in all – after looking at them only once. But the world record for a single eidetic memory feat may be held by Bhandanta Vicitasara of Rangoon, Burma who in 1974 correctly recited from memory 16,000 pages of Buddhist canonical texts."

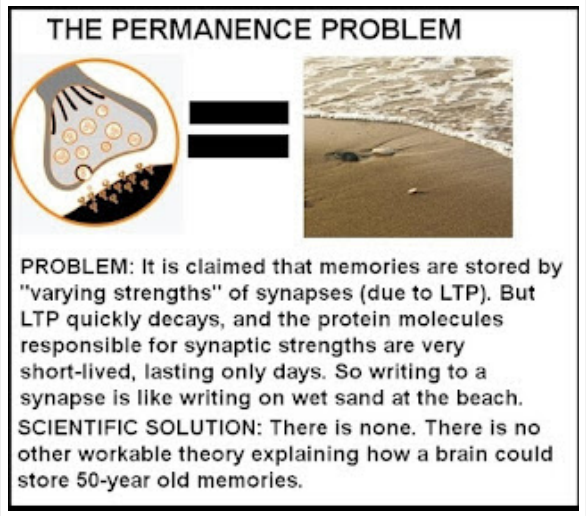
All such feats should be impossible if memory recall occurred by retrieving information from brains. The brain is lacking in anything that can explain the recall of very large bodies of sequential information. Consider the arrangement of neurons. The average neuron has thousands of connections to other neurons. With such an arrangement, there should be no way for sequential memorization to occur. There is no physical ordering that would allow a progression from one neuron to the next neuron, with the progression always occurring the same way through the same series of thousands of neurons. For a particular neuron, there is no "next" neuron or "previous" neuron, but instead thousands of connected neurons. Such an organization should make sequential

- Exhibit A Suggesting Scientists Don't Understand How a Brain Could Store a Memory
- The Dubious Dogma That Brains Make Decisions
- Long Article Tries to Show Neural Memory Storage, but Gives No Real Evidence for It
- How Evidence for ESP Undermines the "Minds Come From Brains" Dogma
- Gender Differences in Brains Help Discredit Prevailing Dogmas About Brains
- Study Finds Equal Brain Connectivity in All Mammals
- Some Reasons the Main Theory of Neural Memory Storage Is Unbelievable
- Scientists Can't Persuasively Explain How a Brain Could Instantly Retrieve a Memory
- The Lack of Evidence for Memory-Storage Engram Cells
- Candid Confessions of the Cognition Experts
- Global Workspace Theory Sure Isn't an Explanation for Consciousness
- When Animals Cast Doubt on Dogmas About Brains
- Memories Can Form Many Times Faster Than the Speed of Synapse Strengthening
- The Guy with the Smallest Brain Had the Highest IQ
- He Had Half a Brain and Above Normal Intelligence
- The Truth About Neurons and Synapses
- A Diagram of Explanatory Dysfunction in Academia
- The Brain Shows No Sign of Working Harder During Thinking or Recall
- More Evidence of High Mental Function Despite Large Brain Damage
- The Lack of a Viable Theory of Neural Memory Encoding
- More Evidence That Neuron Loss Has Little Effect on Cognition
- Fraud and Misconduct Are Not Very Rare in Biology
- Reasons for Doubting Thought Comes from the Frontal Lobes or Prefrontal Cortex
- Why Most Animal Memory Experiments Tell Us Nothing About Human Memory
- Other Evidence of Human Paranormal Abilities

memory access impossible. The point is explained in my post "Why Brains Are Not Suitable for Storing Long Sequences Like Humans Remember."

Item #6: The Detailed Recall of Things People Experienced Decades Ago

My post "Why We Should Not Think the Human Brain Can Store Very Old Memories" explains why the simple fact of humans remembering things for decades is inexplicable under prevailing neuroscience dogmas. Neuroscientists lack any credible explanation for either memory storage or the persistence of memories for decades. Trying to make it sound a little like they have some idea of how memory physically works, neuroscientists use the deceptive term "long term potentiation" (LTP), which actually refers to a very short-term effect that typically lasts only days, and has never been proven to last for years. The prevailing dogma is that memories are stored in synapses, a ridiculous claim given the fact that the average lifetime of synapse proteins is known to be less than two weeks, a length of time 1000 times shorter than the maximum time humans can remember things (50 years or more).


THE PERMANENCE PROBLEM
PROBLEM: It is claimed that memories are stored by "varying strengths" of synapses (due to LTP). But LTP quickly decays, and the protein molecules responsible for synaptic strengths are very short-lived, lasting only days. So writing to a synapse is like writing on wet sand at the beach.
SCIENTIFIC SOLUTION: There is none. There is no other workable theory explaining how a brain could store 50-year old memories.

Item #7: Clairvoyance

We have nearly two hundred years of written evidence for clairvoyance, much of it written by distinguished physicians and scientists. There are various types of clairvoyance. Spontaneous clairvoyance may occur when someone reports the approach of an unexpected unseen visitor who very soon arrives at her doorstep. Some examples can be found here. Nineteenth century literature on hypnotism contains many accounts of people under hypnosis who (when guided on a kind of mental journey by someone familiar with a place) could correctly list all kinds of details of places they had never physically seen. Some examples of this effect (called traveling clairvoyance) can be found here, here, and here. What can be called *"X-Ray" Clairvoyance* involves things such as the ability to correctly read through heavy blindfolds, or to correctly describe the contents of sealed letters and closed boxes, or to see within a human body. Some examples can be found here, here and here. As discussed here and here, research into remote viewing (a modern term for clairvoyance) was long funded by the US government, with many successes reported. The phenomenon of clairvoyance cannot at all be explained within the framework of prevailing neuroscience dogmas.

Item #8: Hypnotic Insensitivity to Pain

- Why Brains Are Not Suitable for Storing Long Sequences Like Humans Remember
- Why Brain Scans Don't Show Brains Make Minds
- Why Strokes, Alzheimer's Disease and Drunkenness Don't Prove the "Brains Make Minds" Dogma
- Synaptic Density Studies Contradict the Most Popular Memory Theory
- The Rare "Total Recall" Effect That Conflicts with Brain Dogmas
- Physical Connections Do Nothing to Explain Cognition
- The Sociological Reasons Why Bad Explanations Persist in Academia
- Split-Brain Cases Conflict with "Brains Make Minds" Dogma
- Why So Much of Neuroscience News Is Unreliable
- An Analogy Clarifying Why the "Brain Stores All Your Memories" Dogma Is Untenable
- Why Darwinism Fails to Explain the Human Mind
- What Is It That a Brain Does?
- Cloud Computing and a Non-Local Model of Consciousness
- Why We Do Not Understand the Origin of Complex Biological Innovations
- Our Minds May Arrive Top-Down Not Bottom-Up
- Fancy New Technology Fails to Prove Memory Dogmas
- The Argument for Determinism Collapses Once We Discard the "Minds Come from Brains" Dogma
- Animal Experiments Conflicting with the Dogma That the Brain Stores All Memories
- Memory Recall Reality Versus the "We Can't Remember Well" Bunk of Professors
- Neuroscientists Keep Using Misleading Coloring in Brain Visuals
- Most Scientists Don't Follow Formal Evidence Standards, Unlike Judges
- Experimental Evidence for ESP Is Well-Replicated
- Imaging of Dendritic Spines Hint That Brains Are Too Unstable to Store Memories for Decades
- NIH Bets $1,434,188 That Synapses Don't Store Memories
- A New Case of Very Large Brain Damage and Normal Mental Function
- When Clue-Blind Professors Ignore All the Signs

See the "Phenomenon #2" section of this post for a discussion. The main relevant work on this is the book here by Dr. James Esdaile, who reported that hundreds of major operations occurred in India under his supervision, involving subjects who had no anesthesia but reported no pain during amputations or removals of large tumors, because they had been told to feel no pain while hypnotized. Another book documenting the same thing is the book "Numerous cases of surgical operations without pain in the mesmeric state" by John Elliotson MD, which can be read here. Such accounts are incompatible with the dogma that the mind is the product of the brain. If such a dogma were true, we would expect that severe pain could only be stopped by physical interventions (such as taking drugs or injections or ice-freezing a body spot were pains come from).

Item #9: Hypnosis at a Distance or Telepathic Knockouts

A phenomenon in which a hypnotist can induce a trance in an unseen person is reported here and here. On the page here we are told, "In 18 of 25 trials Janet and his colleague Gilbert were able to induce a trance in their hysterical subject Leonie at distances varying from 1/4 to 1 mile." The page here tells us the experiments of L. Vasiliev at the University of Leningrad were overwhelmingly successful in producing trances at a distance in subjects, with a 90% success rate, with most of the people trying to produce the trances being in different rooms, and the trance almost always occurring within a few minutes of the remote attempt to make the person entranced. No such phenomenon should be possible if brains are the cause of human minds.

Item #10: Anomalous Sensation Phenomena

It has been very frequently reported that a hypnotized person may instantly feel sensations felt by the person who hypnotized him. A set of experiments on this effect is reported in the "First Report of the Committee on Mesmerism" pages 225-229 of Volume 1 of the Proceedings of the Society for Psychical Research (April, 1883), a committee including the illustrious names of Frederic Myers, Edmund Gurney, Frank Podmore, George Wyld M.D. and the eventually knighted physicist W.F. Barrett. We read this on page 226: "Thus out of a total of 24 experiments in transference of pains, the exact spot was correctly indicated by the subject no less than 20 times." Similar results were obtained by Dr. Edmund Gurney and reported in his paper "An Account of Some Experiments in Mesmerism," published on page 201 of Volume II of the Proceedings of the Society for Psychical Research (June 1884). As reported on page 205, a hypnotized subject identified with high accuracy tactile and taste sensations occurring in a hypnotizer sitting behind him.

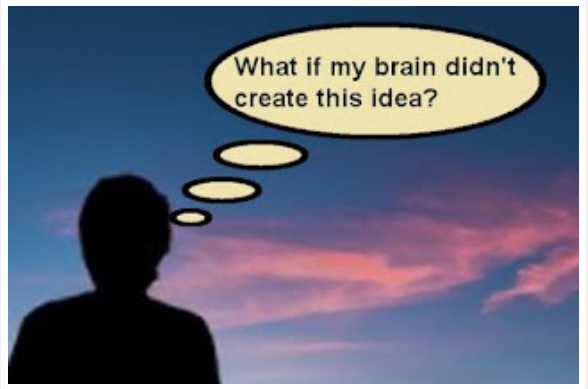
Mirror touch synsethesia is a rare effect by which non-hypnotized people seem to feel tactile sensations of nearby people. The phenomenon is so well-documented that it is not even disputed by some who claim to be skeptical of all paranormal phenomena. A search for "phantom limb pain" will find many matches in mainstream sources, including assertions that most amputees experience such pain (mysteriously arising as if the amputed limb still existed). Such

- Why Neuroscience Hasn't Delivered for Psychiatry
- Panpsychism Arguments Involve an Equivocation Fallacy
- He's Strangely Seeking Memories in Cells Below the Neck
- Just Call Them "Machine-Metaphor-Misguided"
- Way Off in Their Predictions, Neuroscientists Keep Misdescribing Human Memory Performance
- The Biggest Brain Projects Are Still Failing to Support Prevailing Brain Dogmas
- A New Paper Reminds Us Neuroscientists Can't Get Their Story Straight About Memory Storage
- NSF Grant Tool Query Suggests Engrams Are Not Really Science
- Suspect Shenanigans When You Hear Claims of "Mind Reading" Technology
- No, a USC Team Did Not Show "How Memories Are Stored in the Brain"
- Why ESP Discredits the "Brains Make Minds" Claim
- Beware of Neuroscientists Using Cell Nicknames
- The Press Often Gives Us Fake News About Brains
- No Solid Principle Justifies "Brains Make Minds" Thinking
- "Thousands of Participants Are Needed for Accurate Results," But Most Brain Scan Studies Don't Even Use Dozens
- Why the Academia Cyberspace Profit Complex Keeps Giving Misleading Brain Research Reports
- "Brains Make Minds" Idea Flunks an Audit of a Large Brain Scan Database
- Big Study Finds Brain Gray Matter and Cortical Thickness Peak at Age 6 or Earlier, Contradicting Brain Dogmas
- Why the "A Memory Is Stored Throughout the Brain" Idea Makes Things Much Worse
- Principles of a Post-Materialist Science
- EEG Studies Fail to Provide Robust Evidence That Brains Think or Retrieve Memories
- Seven Things in Fast Retrieval Systems, None of Which Your Brain Has
- Studies Debunk Hippocampus Memory Myths
- 11 Authorities Seem to Realize That "Your Brain Is a Computer" Is a Junk Metaphor

experiences should not occur if the mind is merely the product of the brain, but are compatible with ideas such as the idea that you have a soul that may have sensitivity protruding outside of your body, sensitivity that may be increased under hypnosis.

Item #11: The Production of Abstract Ideas

Neuroscientists have no credible tale to tell of how a human could create any abstract idea. In my post "No One Understands How a Brain Could Generate Ideas," I review the miserably bad answers experts give on two expert answer sites when asked how a brain could generate an idea. Humans are capable of building machines that can retrieve information, by using some things that are unlike anything found in the brain: things such as addressing, sorting and indexing. But humans have never built any kind of machine or device capable of generating ideas. You can built a computer program that combines words, and call that an "idea generator," but the term would not be accurate. What the program would generate is merely word combinations, not ideas. Ideas would only arise when a human being read the word combinations. No one has idea of how a human-made device could ever generate ideas. Since ideas are immaterial things, the production of ideas from a material thing seems no more credible than the idea you might squeeze a rock and get it to pour forth blood.



Item #12: Near-Death Experiences, Particularly Veridical Ones

A veridical near-death out-of-body experience is when someone having a close encounter with death reports moving out of his body, and is able to recall observational details that are later verified, details that should have been impossible for the possible to have learned. Some compelling examples can be found here. Examples include patients who reported floating out of their bodies and reporting things on either the roof of the hospital or in floors above them, things they had no opportunity to discover with their ordinary senses. Near-death experiences of this type completely defeat attempts to explain near-death experiences as hallucinations. In general, there is no explanation for dramatic near-death experiences within the framework of prevailing neuroscience dogmas. Such experiences often are lengthy experiences occurring during cardiac arrest, and the brain very quickly flatlines within a few seconds after cardiac arrest, meaning no neural explanations of such events are credible.

Item #13: Apparition Sightings, Particularly Crisis Apparitions

- Don't Be Fooled: Well-Trained Chatbots Aren't Minds
- What the Neuroscientist Should Have Said When Asked About Mind Uploading
- Cognitive Effects of Epilepsy Surgery Clash with "Brains Make Minds" Dogma
- Evolution Does Not Explain DNA, DNA Does Not Explain Bodies, and Bodies Do Not Explain Minds
- "Brain Chemical Imbalance" Theory Is Fading Out as an Explanation for Mental Illness
- Why Plasticity and Neurogenesis Fail to Explain Minds That Work Well After Massive Brain Tissue Loss
- They're Calling It a Huge Memory Research Fraud, But Is It Only the Tip of the Iceberg?
- So Much Misleading Talk Occurs in Claims of a Scientific Consensus
- Shrink-Speaking About a Mere "Problem of Consciousness" Is As Wrong As Shrink-Speaking About a Mere "Problem of Human Shape Origination"
- Longtermism Is Fueled by a Goofy Belief in Computer-Generated Lives
- Given Their Narrow Studies and Slim Narrow PhD Dissertations, Why Are We So Swayed by Neuroscience PhDs?
- Some of the Weak Papers Neuroscientists Cite As Evidence for Their Chief Claims
- For Insight About Your Brain and Mind, Ponder the Never-Founds
- TV Medical Dramas Give Us Wrong Ideas About Minds and Death
- Brain Imaging Shows No Appreciable Neural Correlates of Memory Activity
- The Evidence Inversion Syndrome Blights Academia
- Poorly Designed Brain Scan Experiments Needlessly Put the Needy at Risk
- Science Literature Is Full of Misleading Claims About Brain Waves
- The US Government's False Claims About DNA
- If Neuroscientists Acted Like Cosmologists, They Might Say You Have an Invisible "Dark Brain"
- Exceptionally Fast Thinking Cannot Be Explained by Slow Brains Like We All Have
- Scientists and Clergy Have Much in Common
- 30 Things That Would Never Occur If Prevailing Neuroscientist Dogmas

Volume One of the massive two volume work *Phantasms of the Living* by Edmund Gurney, Frederic Myers and Frank Podmore can be read online here, and Volume Two of the work can be read here. A significant fraction of the 700+ cases reported in that two-volume work are cases in which someone reports seeing or hearing an apparition of a particular person they did not know was dead, only to find out later that just such a person had died on about the same day or exactly the same day (and often on the same hour and day). I have described hundreds of such cases in the series of posts you can read below, which contain many other cases of such "crisis apparitions":

An Apparition Was Their Death Notice

25 Who Were "Ghost-Told" of a Death

25 More Who Were "Ghost-Told" of a Death

Yet Another 25 Who Were "Ghost-Told" of a Death

Scientific American's Very Lame "Ghost Explanations"

They Also Were "Ghost Told" of a Death

More Accounts of Veridical Apparitions

Even More Cases of Veridical Apparitions

When Apparitions Serve as Announcements

Still More Cases of Veridical Apparitions

When Apparitions Act as News Bulletins

They Too Were "Ghost-Told" of a Death

They Seemed to Ghost-Learn of Someone's Death

It Seemed Her Suicide Was Not Her End

When Crisis Appartions Seem to Notify of Someone's Death

Under prevailing neuroscience dogmas the only way to explain a case of this type is to assume a double coincidence: that someone coincidentally happened to have a hallucination (usually the first hallucination of his life) involving seeing a person who had died somewhere else at about the same time the hallucination occurred. Such double coincidences should be very rare, happening to far fewer than one person in a million. But since the number of reports of crisis apparitions of this type are high, we cannot credibly explain them all by some theory involving a double coincidence that should almost never occur.

Item #14: Sightings of the Same Apparitions by Multiple Witnesses

In seven previous posts I discussed cases in which multiple witnesses reported seeing the same apparition. The seven posts are below:

Were True

- "Brains Make Minds" Models All Flunk a Large Brain Scan Study
- The Philosophy of Teleospiritism
- The Biggest Blunders of Theories Such as Integrated Information Theory
- Study Finds No Robust Link Between Brain Structure and Personality
- The Two Huge Mistakes Involved in Typical Talk of a "Hard Problem of Consciousness"
- Neuroscientists Keep Wrongly Assuming the Source of Something Must Be Near Its Observed Manifestations
- The Vague Unfounded Boasts of Biology Sound Like the Vague Unfounded Boasts of Astrophysics
- 8 Reasons for Doubting Claims of the Heritability of Intelligence
- Widely Read Scientific Paper Asks, "What If Consciousness Is Not an Emergent Property of the Brain?"
- Exhibit A Suggesting Scientists Don't Know How a Brain Could Retrieve a Memory
- Exhibit B Suggesting Scientists Don't Know How a Brain Could Retrieve a Memory
- More Indications Scientists Don't Understand How a Brain Could Think or Remember
- Studies New and Old Fail to Show a Big Link Between Brain States and Minds
- Free E-book: Failing Dogmas of Brain Researchers
- Wobbly Hand-Waving Guesswork of the Synapse Memory Theorists
- Cryogenic Electron Microscopy Helps Clarify Synapses Bear No Resemblance to Information Storage Structures
- Did a Stealth Religion Infiltrate Academia?
- Human Thoughts and Memory Are Gigantically Connective, But Brains Have Only Low Connectivity
- Exhibit A Suggesting Scientists Have No Understanding of How a Brain Could Imagine Anything
- There Is No Evidence of a Neural Explanation for Out-of-Body Experiences
- Misleading Claims in Attempts to Naturally Explain Near-Death Experiences and Out-of-Body Experiences
- The Latest Evidence That Scientists Trying to Explain Memory Creation

When an Apparition Is Seen by Multiple Observers: 17 Cases
When an Apparition Is Seen by Multiple Observers: 17 More Cases
More Apparitions Seen by Multiple Observers
Many an Apparition Is Seen by More Than One
Still More Apparitions Seen by Multiple Observers

When an Apparition Is Seen by Not Just One
When Two or More See the Same Apparition

I can quote Edward W. Cox on why such cases are not credibly explained by explanations of neural hallucinations. Cox wrote this:

"*"But, if precisely the same form was seen by two persons at the same place at the same time, we have evidence, and very cogent evidence, of the actual existence of such an object, by reason of the extreme improbability that the identical hallucination should arise in two minds at the same moment. If three or more persons beheld the same object at the same time, the proof amounts almost to demonstration, for the chances against such a concurrence of mental actions are as infinity to one."*

Item #15: Terminal Lucidity

Terminal lucidity occurs when someone who had long suffered from dementia suddenly seems to return to a normal, lucid state of mind just before dying. An example can be read on this page and the next page. On page 410 of the book *Irreducible Mind* we read this:

"Myers (1892b) had referred to the 'sudden revivals of memory or faculty in dying persons' (p.316)...The eminent physician Benjamin Rush...observed that 'most of mad people discover a greater or less degree of reason in the last days or hours of their lives' (p. 257). Similarly, in his classic study of hallucinations, Brierre de Boismont (1859) noted that 'at the approach of death we observed that ... the intellect, which may have been obscured or extinguished during many years, is again restored in all its integrity' (p. 236). Flournoy (1903, p. 48) mentioned that French psychiatrists had recently published cases of mentally ill persons who showed sudden improvements in their condition shortly before death. In more recent years, Osis (1961) reported two cases, 'one of severe schizophrenia and one of senility, [in which] the patients regained normal mentality shortly before death' (p. 24)."

No such thing as terminal lucidity should occur if your brain was producing your mind. Once a mind-producing brain had deteriorated, such a deterioration would be irreversible. A brain producing a mind would no more suddenly restore itself than a book missing many of its pages would suddenly restore such pages.

Item #16: Very High Mental Function Despite Very Heavy Brain Damage

The theory that your brain produces your mind predicts that mental function should be very sensitive to brain damage, with small damage producing very large damage to mental performance. As discussed in my post here, we have much evidence of cases when very large damage to brains had little effect on mental performance. Karl Lashley did countless experiments testing changes in

Are Lost in the Woods

- Study Suggests Massive Faking in Neuroscience Papers
- How Neuroscientists and Science Writers Try to Fool You Into Thinking Brains Store Memories
- Some People Our Neuroscientsts Don't Want You to Know About
- 10 Reasons Synapses Cannot Be a Storage Place for Human Memories
- Why Most Correlation-Fishing Experimental Neuroscience Is Worthless
- Pharmaceutical Company Entanglements Cloud the Objectivity of Neuroscientists and Psychiatrists
- The 4 Nonsensical Parts of the Tale Your Brain Instantly Retrieved an Answer Learned Long Ago
- Neuroscientists Don't Seem Like Paragons of Diligence
- "Brain Is the Most Complex Object in Universe" Claim Exemplifies Credulity About Brain Claims
- Exhibit A That Scientists Have No Understanding of a Physical Basis of Human Memory
- Goofs of the Site Brainfacts.org
- Shady Tricks Used by Writers About the Brain
- The 11 Biggest Neural Shortfalls Hinting Brains Don't Make Minds
- Analysis of 23,810 Brain Scans Finds "Neither Structural Nor Functional Imaging Predicted Individual Psychology"
- All Papers Relying on Rodent "Freezing Behavior" Estimations Are Junk Science
- The Human Brain Project Spent Billions, But Failed to Bolster Claims About Brains Making Minds
- Hydrocephalus Studies Confirming Low Correlation Between Brain States and Intelligence
- The Lack of Evidence That Brains Produce Dreaming, and Some Evidence Hinting They Don't
- How the Academia-Cyberspace-Pharmaceutical-Biotech-Publishing Complex Incentivizes Bad Brain Research
- The Lack of Correlation Between Most Mental Illness and Brain States
- They Stored and Studied Thousands of Brains, But Still Failed to Show Mental Illness Comes From Sick Brains
- They Stored and Studied Thousands of Brains, But Still Failed to Show Brains Store Memories

performance after animals had part of their brain removed or damaged. He found relatively little effect. For example:

1. 13 rats were trained to solve mazes, and we read here "only one animal did not show evidence of the maze habit after removal of the frontal portions of the brain."
2. Monkeys were trained to unlatch latch boxes. After having their prefrontal cortex removed, there was "perfect retention of the manipulative habits."
3. Lashley said, "A number of experiments with rats have shown that habits of visual discrimination survive the destruction of any part of the cerebral cortex except the primary visual projection area."
4. Lashley noted that you could remove half of an animal's cortex without reducing its performance on simple mazes.

A superb scientific paper describing cases of very high mental activity despite very great brain damage is entitled "Discrepancy Between Cerebral Structure and Cognitive Functioning," authored by Nahm, Rousseau and Greyson, two PhD's and an MD. On page 5 we learn of a case reported by Martel in 1823 of a boy who after age five lost all of his senses except hearing, and became bed-confined. Until death he "seemed mentally unimpaired." But after he died, an autopsy was done which found that apart from "residues of meninges" there was "no trace of a brain" found inside the skull. We read of cases reported by physician John Lorber, who studied patients who had lost more than half of their brain from hydrocephalus, a disease turning brain tissue into watery fluid. More than half of the patients studied had above-average intelligence, despite having brains that were mostly destroyed. We read this in the paper:

"[Lorber] described a woman with an extreme degree of hydrocephalus showing 'virtually no cerebral mantle' who had an IQ of 118, a girl aged 5 who had an IQ of 123 despite extreme hydrocephalus, a 7-year-old boy with gross hydrocephalus and an IQ of 128, another young adult with gross hydrocephalus and a verbal IQ of 144, and a nurse and an English teacher who both led normal lives despite gross hydrocephalus."

We are told of a 36-year-old man whose "intellect and language abilities were unimpaired" despite the fact that the left hemisphere of his brain was "almost completely lacking." We are told of a boy who was an average student at a regular school, even though he had a "nearly complete absence" of the right hemisphere of his brain. Referring to a study by Gilliam, the paper states that of 21 children who had parts of their brains removed to treat epilepsy, including 10 who had surgery to remove part of the frontal lobe, "none of the patients with extra-temporal resections had reductions in IQ post-operatively," and that two of the children with frontal lobe resections had "an increase in IQ greater than 10 points following surgery."

The paper here gives precise before and after IQ scores for more than 50 children who had half of their brains removed in a hemispherectomy operation in the United States. For one set of 31 patients, the IQ went down by an average of only 5 points. For another set of 15 patients, the IQ went down less than 1 point. For another set of 7 patients the IQ went up by 6 points.

The paper here (in Figure 4) describes IQ outcomes for 41 children who had half of their brains removed in hemispherectomy operations in Freiburg,

- Major Journal Suggests 3% of Biology Papers Look Like Paper Mill Junk
- This Is What Built the Mighty Castle of Materialism
- Comparing the Dogmas of Cosmology and Biology
- Why Scientific Academia Is Like an Organized Religion
- How to Interview an Overconfident Biologist
- Neuroscientists Claim "Drifting Representations," But It's Mainly Just Their Pareidolia
- Neuroscience "Best of 2023" Reviews Suggests They're Getting Nowhere Trying to Explain Minds by Neural Explanations
- Convoluted "Spaghetti Code" Analysis Pathways Help Neuroscientists Conjure Phantasms That Don't Exist
- 50 Types of Questionable Research Practices
- Cox's Cases Were Better Explained as Evidence Brains Don't Make Minds
- No, Scientist, That Isn't Human Memory or Brain Action, But Merely Computer Activity
- You Would Never Guess From Her Videos That She Has No Frontal Lobes
- Neuroscientists Often Sound Like They Never Seriously Studied Psychical Research
- DNA Is Not a Blueprint, So "All Bets Are Off" About Body Origins and Mind Origins
- Universities Continue to Boast About Pitifully Weak Neuroscience Results
- A Biochemist's Promissory Note About Explaining Minds Sounds Very Lame
- No One Is Actually Doing Thought-Reading by Scanning Brains or Reading Brain Signals
- A Biologist Calls "Orthodox Science" a "Religion" and "Belief System"
- She Has Photographic Memory and Severe Unmanageable Epilepsy
- Traumatic Brain Injury Results Clashing With Prevailing Dogmas About Brains
- "Cells With Minds" Theory Is As Bad As "Brains Make Minds" Theory
- Surprising Studies on Memory Loss or IQ Changes After Brain Surgery or Brain Damage
- Pareidolia Helps Neuroscientists Getting Nowhere Trying to Show a Brain Basis for Memory

Germany. For the vast majority of children, the IQ was about the same after the operation. The number of children who had increased IQs after the operation was greater than the number who had decreased IQs.

Such cases would never occur if prevailing neuroscientist dogmas were true.

Item #17: The Acquisition of Multiple Languages by a Very Young Child

Linguists such as Noam Chomsky have long recognized a very severe explanatory problem: the fact that very young children seem to acquire language skills much more quickly than anyone can explain. By listening to his parents speak (and perhaps also siblings), a child will pick up a new language with great speed. But it seems that the amount of listening the child does is not nearly sufficient to explain the speed with which the child seems to master the use of complex grammatical rules. Chomsky called this problem the "poverty of the stimulus" problem, meaning that the stimulus of hearing family members seems utterly inadequate to explain the mastery of complex language rules that occurs. The problem is doubled in the case of young children. What happens is that very young children with small brains achieve a marvel of learning more impressive than anything that people with much larger brains achieve in college, contrary to what we would expect from prevailing neuroscientist dogmas.

Item #18: Deathbed Visions

Some examples of deathbed visions can be found here and here and here. A survey of family members of deceased Japanese found that 21% reported deathbed visions. A study of 103 subjects in India reports this: "Thirty of these dying persons displayed behavior consistent with deathbed visions-interacting or speaking with deceased relatives, mostly their dead parents." A study of 102 families in the Republic of Moldava found that "37 cases demonstrated classic features of deathbed visions--reports of seeing dead relatives or friends communicating to the dying person." A 1949 book states this:

"It is a commonplace truth, observed by many physicians and clergymen, that a dying person, when conscious near the moment of death, acts or speaks as if he saw standing near loved ones who have already died. Dr. Russell Conwell told Bruce Barton in the interview quoted earlier in another connection, that he had witnessed this phenomenon 'literally hundreds of times.' "

There is no credible explanation of this phenomenon within the framework of prevailing neuroscience dogmas. In the main scholarly work on the topic (*At the Hour of Death*, involving a well-funded multi-year study), the authors demonstrated that most such deathbed visions occur to people without organic brain disease, who were not on any drugs that might cause hallucinations.

Item #19: Very Fast and Accurate Complex Calculations by Anyone Not Using a Mechanical Device or a Writing Tool

Neelakantha Bhanu Prakash has been called the world's fastest calculator, and can do things such as multiply 869,463,853 times 73 correctly in only 26 seconds, giving an answer of 63,470,861,269. This is despite having a very serious head injury which required 86 stitches, and left him with a prominent scar on his forehead. According to the Guinness Book of World Records, "Scott Flansburg of Phoenix, Arizona, USA, correctly added a randomly selected two-digit number (38) to itself 36 times in 15 seconds

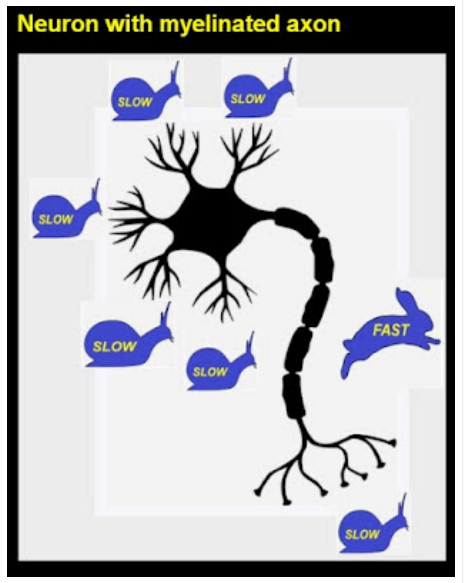
- HSAM Memory Whiz Subjects Scored 25 Times Higher on a Random Dates Test
- How High-Speed Life Reviews in Near-Death Experiences Discredit "Brains Make Minds" Claims and "Brains Store Memories" Claims
- More Indications That Scientists Have No Understanding of How a Brain Could Think
- Searching Hard for Evidence of Strokes Causing Loss of Episodic or Conceptual Memories, They Come Up Short
- Cognitive Neuroscience Is Floundering, So the Kavli 2024 Neuroscience Prize Went to Low-Quality Research
- We Cannot Trust Neuroscientists to Speak Accurately About What Brains Do and What Minds Experience
- The Mythology of "Memory Maintenance Molecules"
- No, Noise Miners, Neurons Don't Encode Words
- The Lack of Bodily Addresses Crushes the Credibility of Mechanistic Biology and Mechanistic Psychology
- She Didn't Seem to Need the Right Half of Her Brain, and Losing It Did Not Seem to Dim Her Memories
- 60+ Aspects of the Human Mind, and Whether Brains Explain Them
- Papers Claiming Brain Memory Storage Keep Citing Poor Science Papers
- A Report of "Unimpaired Faculties Without a Brain" (John Bly)
- Exhibit A That There Is No Such Thing as a Chemical Root of Consciousness
- Look Very Closely at a Study Claiming Thought Reading of Brains, and You'll Find the Shady Tricks Behind It
- UK Biobank Study of Thousands of Brains Finds Negligible Correlation Between Brain Size and Intelligence
- Neuroscientists Senselessly Think They Can Perform Innumerable Contortions of Brain Data, and Then Claim a Discovery
- They Mapped 150 Million Synapses, and Found No Sign of Stored Memories
- Brains Show No Physical Signs of Reading or Retrieval When You Recall Something
- In 1941 the Editors of Scientific American Confessed That Telepathy Was Proven
- Old Newspaper Stories Relevant to Whether Brains Make Minds

without the use of a calculator on 27 April 2000 on the set of Guinness World Records in Wembley, UK." There are countless recorded cases of such blazing fast "all in the mind" calculation involving math or dates, and the cases often involve people with defective brains. For example:

- A Dr. J. Langdon Down described a 12-year-old boy who could multiply any three numbers by any other three numbers, as quickly as Down could write the six numbers on paper.
- A Dr. Alfred F. Tredgold mentioned a person who could give the square root of any four digit number in an average of four seconds, and who could give the cube root of any six-digit number in about six seconds. He said that when the same person "was asked about how many grains of corn there be in any one of 64 boxes, with 1 in the first, 2 in the second, 4 in the third, 8 in the fourth, and so on, he gave answers for the fourtheenth (8,192), for the eighteenth (131,072), and the twenty-fourth (8,388,608) instantaneously, and he gave the answer for the forty-eighth box (140,737,488,355,328) in six seconds," and that he "also gave the total in all 64 boxes correctly (18,446,734,073,709,551,615) in forty-five seconds."
- A blind boy named Fleury was of such low intelligence he had to be institutionalized, but he could calculate 2 to the 30th power (1,073,741,824) in only 40 seconds, and could calculate the cube root of 465,484,375 (which is 775) in 13 seconds.
- A pair of twins named George and Charles (born three months prematurely) could do calendar calculations with blazing speed. We read this: "Give them a date and they can give you day of the week over a span of 80,000 years, 40,000 backward or 40,000 forward." Also, we read that if you "ask them to name in which years in the next 200 (or any 200) Easter will fall on March 23," then they "will name those years with lightning rapidity, faster than a computer and just as accurately." This seems all the more impressive when you consider that the rules for when Easter will occur in a particular year are quite complicated.

No such cases are explicable under prevailing neuroscience dogmas such as the dogma that the brain makes the mind. The reality is that the brain has shortfalls that should prevent any such thing from happening. The first shortfall involves speed. The widely quoted figure of about 100 meters per second for brain signals is very misleading. That is the fastest that a signal can travel in any part of the brain, when signals pass through myelinated axons. But most axons in the cortex are not myelinated, and most of the tissue in the brain consists of relatively slow dendrites. According to neuroscientist Nikolaos C Aggelopoulos, there is an estimate of 0.5 meters per second for the speed of nerve transmission across dendrites (see here for a similar estimate). That is a speed 200 times slower than the nerve transmission speed commonly quoted for myelinated axons. Then there is the enormous slowing factor caused by the need for brain signals to cross across synapses, serious "speed bumps" that should slow down brain signals very much.

- Newspaper Accounts of Memory Marvels (Part 1)
- Why Your Brain Is Not Like a Computer
- They Memorized Many Times Faster Than a Brain Could Ever Do
- Faltering Neuroscientists Improperly Offer Computer Science Papers as Examples of Neuroscience Progress
- The Brains of 60 Subjects Seemed to Look the Same During Eyes Closed Mental Rest, Recall and Math Activity
- The Problem of Explaining Human Minds Is a Million Times Larger Than a Mere "Problem of Conscious Experience"
- Large Neuron Groups Cannot Be Sequentially Traversed, So Brains Cannot Store Complex Learned Information
- Eyes and Minds Can Focus, But Brains Cannot Physically Focus
- Most Subjects in Neuroscience Research Do Not Understand the Risks They Are Taking
- Neuroscientists Cannot Credibly Explain Any of These 11 Features of Out-of-Body Experiences
- Microscopes Will Never Find the Slightest Trace of Learned Information in a Human Brain
- Newspaper Accounts of Memory Marvels (Part 2)
- The Reason You Will Never Be Able to Upload Your Mind Is the Same Reason You Won't Ever Need To
- Brain Tumors Seem to Have Relatively Little Effect on Cognitive Function
- Newspaper Accounts of Memory Marvels (Part 3)
- They Mentally Calculated Faster Than a Brain Could Ever Do
- Claimed Evidence for "Concept Cells" Is Just Noise-Mining Nonsense
- More Candid Confessions of the Cognition Experts
- Neuroscientists Offer Only the Most Hazy Hand-Waving When Trying to Explain Memory
- List of Breakthrough Prize Winners in Life Sciences Hints at the Lack of Progress in Cognitive Neuroscience
- HSAM Wonder Daniel McCartney Was a Math and Memory Marvel
- LTP Research Has Done Nothing to Show Any Neural Basis for Memory Creation
- The Lack of Strong Links Between Mental Illness and Brain States



There is no reason to think that the average speed of signals in the brain should be much faster than the speed at which electrical signals travel around the brain during seizures. The paper here lists a speed of only about 1 millimeter per second for seizures in the human brain, saying, "Seizures propagate slowly to connected areas with speeds on the order of 1 mm/s." There is no reason to think that some hypothetical brain signals involved in thinking would occur much faster than seizures. The problem is that such a speed is way, way too slow to account for the blazing fast mental speed of the world's fastest calculators.

Another shortfall of the brain is reliability. It has been repeatedly stated in neuroscience literature that brain signals travel across chemical synapses with a reliability of only .5 or smaller, and almost all synapses in the brain are chemical synapses. In an interview, an expert on neuron noise states the following:

"There is, for example, unreliable synaptic transmission. This is something that an engineer would not normally build into a system. When one neuron is active, and a signal runs down the axon, that signal is not guaranteed to actually reach the next neuron. It makes it across the synapse with a probability like one half, or even less. This introduces a lot of noise into the system."

That unreliability should utterly prevent accurate signal transmission, preventing any such thing as people accurately performing very complex calculations in their minds by using their brains. For people to accurately perform very quickly very complex calculations using a brain, the brain would need to have *both* reliable transmission across synapses and very fast average signal speed. Your very noisy brain has neither of these things. The very high levels of multiple types of noise in the brain should prevent both accurate recall of long bodies of text and also accurate "all in the mind" calculation of complex mathematical problems.

- Subject MM Had a Stupendous Memory for Facts, But a Normal Brain
- Lighting-Fast Readers Exceed the Speed Limits of a Brain
- They Too Mentally Calculated Faster Than a Brain Could Ever Do
- They Did Well After a Huge Loss of Brain Tissue
- Newspaper Accounts of Memory Marvels (Part 4)
- NIH's Million-Dollar "Epigenetic Memory" Bet Fails
- The Myths About Patient K. C. and Patient H. M.
- He Had Half a Brain But "Superior Intelligence"
- New Poll Suggests About 29% of Neuroscientists Doubt the Synaptic Memory Theory
- They Lost Huge Parts of Their Brains, But Their Knowledge and Recollection Were Preserved
- The Groundless Myth That "Floods" or "Surges" Help Explain Near-Death Experiences
- Physically Unrealistic NEPTUNE "Model" of Near-Death Experiences Is a Misleading Mishmash

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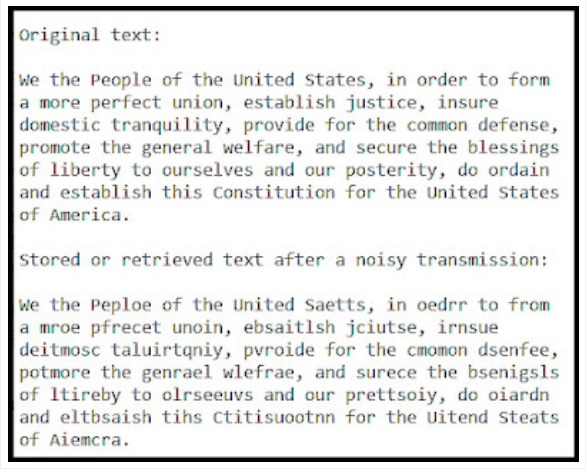
Original text:
We the People of the United States, in order to form a more perfect union, establish justice, insure domestic tranquility, provide for the common defense, promote the general welfare, and secure the blessings of liberty to ourselves and our posterity, do ordain and establish this Constitution for the United States of America.
Stored or retrieved text after a noisy transmission:
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Item #20: Precognitive Dreams

In the posts below I have given many examples of dreams, visions or eerie voices that seemed to foretell a death:

When Dreams or Visions Foretell a Death

More Dreams or Visions That Seemed to Foretell a Death

Still More Dreams or Visions That Seemed to Foretell a Death

Still More Dreams, Visions or Voices That Seemed to Foretell a Death

Even More Dreams and Visions That Seemed to Foretell a Death

There is no credible explanation of such cases within the framework of prevailing neuroscientist dogmas.

Item #21: Experimentally Reproducible Precognition

Cornell University emeritus professor Daryl Bem wrote a paper published in a peer-reviewed scientific publication, the *Journal of Personality and Social Psychology,* a paper that seemed to show experimental evidence for precognition. The widely discussed paper was entitled, “Feeling the Future: Experimental Evidence for Anomalous Retroactive Influences on Cognition and Affect.” Skeptics were outraged by these results, claiming they would never be replicated. But they were replicated. The meta-analysis here ("Feeling the future: A meta-analysis of 90 experiments on the anomalous anticipation of random future events") discusses 90 experiments from 33 laboratories in 14 different countries. The analysis reported an overall effect of $p=1.2 \times 10^{-10}$. Roughly speaking, this means the results had a probability of about 1 in 10 billion. This is a very impressive result, showing statistical significance millions of times stronger than what is shown in typical papers reported by mainstream media. A typical paper that gets covered by the press will have a statistical significance of only about p=.01 or p=.05. There is no credible explanation of such evidence within the framework of prevailing neuroscience dogmas.

Item #22: Poltergeist Activity

There have been many well-documented cases of many objects inexplicably moving around in particular places. Twelve well-documented cases are discussed in my post here. Credible explanations of such cases involve ideas such as mind over matter, or activity by invisible spiritual forces. There are no

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November 2021 (3)
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credible explanations for such cases within the straightjacket of prevailing neurocience dogmas.

Item #23: Mind Over Matter

The mind-over-matter effect of table turning (also called table tipping) was reported with very great frequency by a host of distinguished observers in the nineteenth century. This phenomenon of table turning (and related anomalous phenomena) were scientifically investigated by a distinguished scientist, Harvard chemistry professor emeritus Robert Hare. Hare started out completely believing in Michael Faraday's idea that table turning was caused purely by muscular force. But his investigations led him to reject such an idea. In 1855 he published a long book reaching the conclusion that the phenomenon involved an inexplicable paranormal reality. For example, on page 46 he states, "I first saw a table continue in motion when every person had withdrawn to about the distance of a foot; so that no one touched it; and while thus agitated on our host saying, 'Move the table toward Dr. Hare,' it moved toward me and back again." This is only one of countless paranormal incidents described in the book, which Hare mainly regarded as proof of some mysterious paranormal reality. He devised numerous scientific instruments to test paranormal effects, and frequently found them to give dramatic inexplicable results.

This phenomenon of table turning was also scientifically investigated at length by Count Agenor de Gasparin, who published in 1857 a two-volume scientific book describing countless paranormal effects (such as table levitation and mysterious rappings) observed under controlled conditions. Gasparin's research is well-summarized in Chapter VI of the book *Mysterious Psychic Forces* by the astronomer Camille Flammarion. For example, Gasparin described this happening on September 3, 1853:

"Some one proposed the experiment which consists in causing a table to rotate and give raps while it has on it a man weighing say a hundred and ninety pounds. We accordingly placed such a man on the table, and the twelve experimenters, in chain, applied their fingers to it. The success was complete: the table turned, and rapped several strokes. Then it rose up entirely off the floor in such a way as to upset the person who was upon it."

Such a result is inexplicable through any theory of subconscious muscle movement. Gasparin reported the following occurring on October 7, 1853:

"Let us turn again to the finest of all demonstrations, that of levitation without contact. We began by performing it three times. Then, since it was thought by some that the inspection of the witnesses could be carried on in a surer way in the case of a small table than in that of a large one, and with five operators more certainly than with ten, we had a plain deal centre-table brought which the chain, reduced by half, sufficed to put in rotation. Then the hands were lifted, and, contact with the table being entirely broken, it rose seven times into the air at our command."

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January 2021 (3)
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June 2020 (3)
May 2020 (2)
April 2020 (1)
March 2020 (1)
February 2020 (2)
January 2020 (1)
December 2019 (1)
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September 2019 (1)
August 2019 (1)
July 2019 (2)
June 2019 (1)
May 2019 (1)
April 2019 (1)
February 2019 (1)
January 2019 (1)
December 2018 (1)
November 2018 (3)
September 2018 (1)
August 2018 (1)
July 2018 (1)
June 2018 (1)
April 2018 (30)

Labels

- "brain as computer" metaphor
- above-average IQ with huge brain tissue loss
- academia dysfunction
- acquired savant syndrome
- adult neurogenesis
- agenesis of corpus callosum
- aging
- AI
- Alzheimer's disease
- amnesia
- analytic idealism
- bad computer programming in neuroscience studies
- bad predictions by scientists
- bad psychiatric surveys
- bad psychiatry
- bilingualism with half a brain

Since this was a report of levitation of a table without contact, it obviously cannot be explained through Faraday's "ideomotor effect" of subconscious muscle movement. Shockingly, the phenomenon of table turning had stood up well to rigorous scientific experiments, with the investigators finding it to be a mysterious paranormal reality rather than something they could debunk.

Something similar was reported in 1855 by Eliab Wilkinson Capron, who reported that a "table moved on the floor with nobody touching it – moved to the distance of a foot or more and back, in various directions." In 1869 the London Dialectical Society (a rationalist organization) launched a major scientific investigation of phenomena such as table turning. It concluded that "movements of heavy bodies take place without mechanical contrivance of any kind or adequate exertion of muscular force by the persons present, and frequently without contact or connection with any person."
Excerpts of the report of the committee can be read here, and the entire report can be read here. The twentieth century provided numerous additional examples of mind over matter, something that should never occur if the mind is merely the product of the brain.

Item #24: Medium Activity Seeming to Show Unaccountable Knowledge of the Deceased

The case of Leonora Piper is one of the most astonishing cases in the annals of psychic phenomena. Witnesses who met with her repeatedly claimed that she seemed to have knowledge that could not have been acquired through any well-understood means. For many years Piper would fall into a trance, and then begin speaking in a different-sounding voice, often a voice of someone identifying himself as someone other than Piper. Such a mysterious "control" would often seem to know things that Leonora Piper could not possibly have known. In later years under such trances Piper would produce writings called automatic writings. The case of Leonora Piper was extremely well documented in the Proceedings and Journal of the Society for Psychical Research. Using the link here takes you to my post linking to the original documents and the testimony of investigators. The original publication describing such observations can be read here.

On page 438 we read this: "Mr. Hodgson has been in the habit of bringing acquaintances of his own to Mrs. Piper, without giving their names; and many of these have heard from the trance-utterance facts about their dead relations, etc., which they feel sure that Mrs. Piper could not have known." On page 440 we read this introductory remark by Frederic Myers:

"On the whole, I believe that all observers, both in America and in England, who have seen enough of Mrs. Piper in both states to be able to form a judgment, will agree in affirming (1) that many of the facts given could not have been learnt even by a skilled detective ; (2) that to learn others of them, although possible, would have needed an expenditure of money as well as of time which it seems impossible to suppose that Mrs. Piper could have met ; and (3) that her conduct has

- binary memory storage theory
- biotech industry influence on neuroscience
- brain abscess
- brain changes with age
- brain collections
- brain connectivity
- brain cyst
- brain effect on personality
- brain imaging
- brain injury
- brain physical shortfalls
- brain research projects
- brain shortfalls
- brain signal speed
- brain size and intelligence
- brain surgery
- brain tumors
- brain uploading
- brain waves
- calendar calculator
- CAMKII
- CBC theory
- chemical imbalance theory of mental illness
- citation errors
- citation of low-quality research
- claim of Jennifer Aniston cell
- claims of brain localization
- claims of chromatin involvement in memory
- claims of concept cells
- claims of concept-selective regions in the brain
- claims of epigenetic encoding of memory
- claims of mind reading by brain scans
- claims of neural correlates of love
- claims of neural correlates of memory activity
- claims of neural correlates of mental activity
- claims of neural representations
- claims that brains think
- clairvoyance
- conscious cells theory
- consciousness
- consciousness shadow-speaking
- corporate funding of neuroscientists
- COVID-19
- cryo-EM
- Darwinism

never given any ground whatever for supposing her capable of fraud or trickery. Few persons have been so long and so carefully observed ; and she has left on all observers the impression of thorough uprightness, candour, and honesty."

This all occurred in the late nineteenth century, which excludes all explanations of technological trickery. Within the framework of prevailing neuroscience dogmas, there is simply no explanation for a case such as this. So neuroscientists as a rule avoid mentioning it.

Item #25: Little or No Memory Loss After Hemispherectomy Operations

Below are the results reported in the American Journal of Psychology, Vol. 46, No. 3 (Jul., 1934), pages 500-503, regarding work of W. E. Dandy, in which he removed half of the brains of patients. You can read the results in the preview here (without doing any registration). We read the following (I have put a few of the sentences in boldface):

"*Dandy has completely removed the right cerebral hemisphere from eight patients. He has performed total extirpations of one or more lobes much oftener... There are tabulated below certain generalizations on the effects of removing the right hemisphere.... The operation was the complete extirpation of the right frontal, temporal, parietal, and occipital lobes peripheral to the corpus striatum. The weight of the tissue removed varies, with the pathological conditions involved, from 250 to 584 grm [grams].Coherent conversation began within twenty-four hours after operation, and in one case on the afternoon of the same day.* ***Later examinations showed no observable mental changes. The patients were perfectly oriented in respect of time, place, and person; their memory was unimpaired for immediate and remote events; conversation was always coherent; ability to read, write, compute, and learn new material was unaltered.*** *Current events were followed with normal interest. There were no personality changes apparent; the patients were emotionally stable, without fears, delusions, hallucinations, expansive ideas or obsessions, and with a good sense of humor; they joked frequently. They showed a natural interest in their condition and future. They cooperated intelligently at all times throughout post-operative care and subsequent testing of function."*

It would be rather hard to imagine a more decisive refutation of the claim that the human brain is the source of the human mind, and the claim that the human brain is the storage place of human memories. Here are eight people who had half of their brains removed. Yet the people showed "no observable mental changes," and "their memory was unimpaired for immediate and remote events." The people could read, write, compute and learn just as if nothing had happened, and "there were no personality changes."

On page 59 of the book *The Biological Mind*, the author states the following about hemispherectomy operations involving removal of half of the brain, to stop very severe and frequent seizures:

"A group of surgeons at Johns Hopkins Medical School performed fifty-eight hemispherectomy operations on children over a thirty-year period. 'We were awed,' they wrote later of their experiences, 'by the apparent retention of memory after removal of half of the brain, either half, and by the retention of the child's personality and sense of humor.'

- default mode network
- dementia
- dendritic spines
- depression
- distributed recall hypothesis
- DNA
- dreams
- EEG studies
- eidetic memory
- emergence
- emergentism
- engram
- epigenetics
- epilepsy
- ESP
- evolution
- exceptional auditory memory
- exceptional mathematics ability
- exceptional memory
- exceptional multitasking
- exceptional musical memory
- exceptional reading ability
- exceptional recall of facts
- exceptional recall of number sequences
- exceptional recall of text sequences
- exceptional recognition memory
- exceptional speed of memorization
- exceptional speed of thinking
- exceptional time-related ability
- excessive and potentially hazardous brain scanning in neuroscience research
- extent of paranormal experience
- famous neuroscience case histories
- fastest memorizers
- feedback loops
- file drawer effect
- first rule of neural explanation
- fMRI
- free books by Mark Mahin
- free will
- free-exploratory neuroscience technique
- freezing behavior
- frontal lobes
- fusiform face area
- Gadolinium contrast agents
- gaslighting
- genes
- global workspace theory

Item #26: Long-Term "Body Borrowing"

Two very well-documented cases of this phenomenon are discussed in my long post "When Minds Seem to Borrow Bodies." In both cases a living person claimed to be a person who had previously died, showing memories matching those of the deceased person. Such cases have no explanation within the framework of prevailing neuroscience dogmas.

Item #27: Life-long Continuation of a Single Self in Someone With a Normal Brain

There is nothing rare in the life-long continuation of a single self in someone with a normal brain. Such a thing happens with almost everyone, except perhaps split personalities. But the simple fact of unvarying self-hood is inexplicable under prevailing neuroscience dogmas. The diverse regions of the brain produce billions of largely random electrical signals, which we should never expect to give rise to a single unified self. The brain consists of two identical hemispheres, and if such hemispheres were to give rise to any selves, we would expect that the result would be two selves, rather than one.

Item #28: Telepathy Verified Under Laboratory Conditions

Some very convincing examples of ESP under experimental conditions are discussed here, here and here. The table below (from the link here) summarizes the results of Professor Joseph Rhine's laboratory experiments with Hubert Pearce at Duke University. These are tests in which the expected success rate is 5 out of 25, or 1 in 5. There is no way to work in some hypothesis of cheating with the results reported here. The table shows that Pearce got the same super-dramatic results even in a series of 650 trials when he was looking away from the cards, and also in a series of 300 trials in which there was a screen separating the cards and Pearce.

Ser. No.	Conditions	No. of Trials	No. of Hits	Deviation and p.e.		Value of X	Avge. per 25
1.	General B.T. as described above *Special Conditions*	5,000	1,834	+834	±19.1	43.7	9.2
2.	S. looks away from cards	650	279	149	6.9	21.6	10.7
3.	Same as 2, plus calling before removing	475	236	141	5.9	23.9	12.4
4.	Same as 3; no contact with cards	275	74	19	4.5	4.2	6.7
5.	Same as 3, plus *New cards*; data on first 3 times used	1,675	626	291	11.0	26.5	9.3
6.	(a) Screen, concealing cards (B.T)	300	99	39	4.7	8.3	8.3
	(b) Same, plus P.T. (*i.e.*, gen. E.S.P.; Agent screened)	300	116	56	4.7	11.9	9.7
7.	D.T., pack left unbroken till end of run	1,625	482	157	10.9	14.4	7.4
Total, P.C. (except 6b)		10.300	3,746	+1.686	±27.4	61.5	9.1

Even more impressive was the result of a remote test, in which a Professor Riess performed thirty-seven experimental sessions in which a 26-year old woman in a different building was asked to guess which of 5 ESP cards had been randomly chosen by Professor Riess. The woman guessed an average of 18.24 cards correctly per 25 cards, achieving a phenomenal 73% accuracy rate (instead of the expected accuracy rate of 20%). This was the result in "Series

- gnostic cells
- groupthink
- health hazards in neuroscience experiments
- hemispherectomy
- high mental function despite large brain damage
- hippocampus
- how to detect bad neuroscience
- HSAM (Highly Superior Autobiographical Memory)
- Human Brain Project
- hydrocephalus
- hyperlexia
- hyperscanning
- hyperthymesia
- hypnosis
- idea creation
- idealism
- imagination
- inappropriate neuroscience prize awards
- informed consent
- instincts
- integrated information theory
- intelligence after brain injury
- intelligence of animals with small brains
- interbrain synchrony
- IQ increase after brain tissue removal
- IQ increase after hemispherectomy
- keep-torturing-the-data-until-it-confesses tactics
- lack of corpus callosum
- lack of neural correlates of thinking
- lack of progress in cognitive neuroscience
- life review
- longtermism
- loss of cerebellum
- loss of corpus callosum
- loss of frontal lobes
- loss of half of brain
- loss of left half of brain
- loss of most of brain
- loss of right half of brain
- loss of temporal lobe
- low connectivity of brains
- low statistical power in neuroscience experiments
- LTP
- M. Mahin autobiographical sketch
- materialism

A" of two series of tests with the young woman. The chance of getting such a result accidentally is far less than 1 in 1,000,000,000,000,000 (this link estimates the probability of getting these results by chance as 1 in 10 to the 700th power, which is smaller than the chance of you correctly guessing all of the social security numbers of a set of 70 strangers). Page 36 of Louisa Rhine's book *ESP in Life and Lab* tells us the story of the Riess remote ESP test described above. The Riess experiment is also discussed on page 167-168 of Rhine's book *Extra-sensory Perception After Sixty Years* (see here or here). Another discussion of the experiment is here.

A paper on the Cornell Physics Paper server gives this summary of the telepathy evidence from the ganzfeld experiments run in recent decades, in which the success rate expected by chance is 25%:

"From 1974 to 2018, the combined ganzfeld database contained 117 studies. Of those, studies using targets sets with 4 possible targets included 3,885 test sessions, resulting in 1,188 hits, corresponding to a 30.6% hit rate. With chance at 25%, this excess hit rate is 8.1 sigma above chance expectation ($p = 5.6 \times 10^{-16}$). Analysis of these studies showed that similar effect sizes were reported by independent labs, that the results were not affected by variations in experimental quality, and that selective reporting biases could not explain away the results. The Bayes Factors (BF) associated with the last 108 more recently published ganzfeld telepathy studies was 18.8 million in favor of H1 (i.e., evidence favoring telepathy). Given that BF > 100 is considered 'decisive' evidence, this outcome far exceeds the 'exceptional evidence' said to be required of exceptional claims.[48,49] By comparison, in particle physics experiments effects resulting in 5 or more sigma are considered experimental 'discoveries.'"

The probability of 1 in 5.6×10^{-16} cited is a likelihood of less than 1 in a quadrillion. Within the framework of prevailing neuroscience dogmas, all such results are inexplicable. Since the results are largely remote results produced by people separated by distance, they cannot be explained by any speculative theory that the brain can act as a radio transmitter and radio receiver (a theory not supported by any neuroscience studies).

Item #29: Continuation of a Single Self After Split-Brain Surgery

To stop very bad epileptic seizures, doctors sometimes sever the corpus callosum that connects the two hemispheres of the brain. If prevailing neuroscience dogmas were true, such an operation should either produce a radically diminished mind, or two minds in the same body. No such thing happens, although sometimes we hear deceptive claims to the contrary.

In the video here we see a split-brain patient who seems like a pretty normal person, not at all someone with "two minds." And at the beginning of the video here the same patient says that after such a split-brain operation "you don't notice it" and that you don't feel any different than you did before – hardly what someone would say if the operation had produced "two minds" in someone. And the video here about a person with a split brain from birth shows us what is clearly someone with one mind, not two.

- mechanistic biology
- memory after brain injury
- memory encoding
- memory maintenance
- memory recall
- memory storage
- mental focus
- mental illness
- methylation theory of memory storage
- microscopic analysis of brain tissue
- microtubules
- mind over matter
- mind uploading
- misleading visuals in brain imaging papers
- misstatements about neuroscience case histories
- molecular machinery
- morphogenesis
- Morris water maze
- multiple copies of a memory theory
- narrowness of neuroscientist studies
- natural selection
- near death experiences
- network neuroscience theory
- neural noise
- neuron nicknames
- neuroscience blogs
- neuroscience research endangering patients with brain problems
- neuroscientist confessions
- neuroscientist hand-waving
- neuroscientist pareidolia
- noise-mining
- non-local consciousness
- nonneuralism
- novelty preference technique
- opinion poll of neuroscientists
- optogenetics
- orchestrated objective reduction theory
- origin of biological complexity
- origin of man
- origin of Mind
- origin of minds
- out-of-body experiences
- overblown hype
- pain insensitivity
- panpsychism
- paranormal phenomena
- patient H.M.

A scientific study published in 2017 set the record straight on split-brain patients. The research was done at the University of Amsterdam by Yair Pinto. A press release entitled "Split Brain Does Not Lead to Split Consciousness" stated, "The researchers behind the study, led by UvA psychologist Yair Pinto, have found strong evidence showing that despite being characterised by little to no communication between the right and left brain hemispheres, split brain does not cause two independent conscious perceivers in one brain."

The press release states the following: "According to Pinto, the results present clear evidence for unity of consciousness in split-brain patients."
The paper states, "These findings suggest that severing the cortical connections between hemispheres splits visual perception, but does not create two independent conscious perceivers within one brain." The article here in Psychology Today describes the bizarre experiment that was used to make the groundless claim that split-brain patients have two minds. It was some experiment based only on visual perception, using some strange experimental setup unlike anyone normally encounters. The article shreds to pieces claims that results from such an experiment show that split-brain patients have two minds:

"Not so fast. There are several reasons to question the conclusions Sperry, Gazzaniga, and others sought to draw. First, both split-brain patients and people closest to them report that no major changes in the person have occurred after the surgery. When you communicate with the patient, you never get the sense that the there are now different people living in the patient's head.

This would be very puzzling if the mind was really split. Currently, you are the only conscious person in your neocortex. You consciously perceive your entire visual field, and you control your whole body. However, if your mind splits, this would dramatically change. You would become two people: 'lefty' and 'righty.' 'Lefty' would only see what is in the right visual field and control the right side of the body while 'righty' would see what's in the left visual field and control the left side of the body. Both 'lefty' and 'righty' would be half-blind and half-paralyzed. It would seem to each of them that another person is in charge of half of the body.

Yet, patients never indicate that it feels as though someone else is controlling half of the body. The patients' loved ones don't report noticing a dramatic change in the person after the surgery either. Could we all — patients themselves, their family members, and neutral observers — miss the signs that a single person has been replaced by two people? If you suddenly lost control of half of your body, could you fail to notice? Could you fail to notice if the two halves of your spouse's or child's body are controlled by two different minds?"

Item #30: Dream Series Repeating Themes of Life After Death

In general neuroscientists have no credible explanations for why dreams should occur. Neuroscientist speculations about some memory function of dreaming are not well-supported by evidence, and are contradicted by the fact that most

- patient K.C.
- pharmaceutical industry influence on neuroscience
- philosophy
- philosophy of biology
- philosophy of mind
- Phineas Gage
- photographic memory
- physical shortfalls of all brains
- physicalism
- PKMZ
- PKMzeta
- place cells
- post-hypnotic amnesia
- pre-1975 near-death experience
- pre-1975 out-of-body experience
- precognition
- predicting intelligence from brains
- predicting psychology from brains
- predictions
- prefrontal cortex
- preservation of learned knowledge after hemispherectomy
- preservation of learned knowledge after loss of much of brain
- preservation of learned knowledge in animals after brain tissue loss
- protein turnover
- psychiatric mudslinging
- psychiatry
- psychical research
- quantum mechanics
- questionable research practices
- recall of 50-year-old memories
- recall of long texts
- recommended books
- redundant memory storage
- relative ease of getting a neuroscience PhD
- reliable techniques for measuring recall in rodents
- remote viewing
- replication crisis
- research abuse of epileptics
- savants
- science academia resemblance to organized religion
- science journalism
- scientific consensus
- scientific fraud
- scientist misconduct
- sequential traversal of neurons

people's dreams seem to involve random content unrelated to anything recently learned.

In a Dream Catcher study described here and the 2020 scientific paper here, EEG recordings were made of subjects while they were sleeping. The subjects were awakened at random times, and asked to tell whether or not they were dreaming. Then some scientists ("blind" to which EEG readings were from the dreamers) were asked to guess whether particular subjects were dreaming. The result was a null result. There was no evidence that by studying EEG recordings you can tell whether a person is dreaming.

Scientists apparently delayed the release of these results for years. A 2015 paper describes results just like those of the Dream Catcher study, but results that had apparently not yet been published:

"When data from serial awakenings of 9 subjects had been collected, these data were divided. Introspective reports and electroencephalographic recordings were analysed by different judges who were ignorant of which EEG sequences had led to dream reports and which ones had not. An external EEG research group used a number of statistical methods to identify the signature of the recordings that were followed by dream reports. But the accuracy of their predictions turned out to be no better than chance. A doctoral researcher presenting these findings at a conference explained that there were 4 different explanations for this failure: 'Subjective experience is a) not in the brain, b) is in the brain, but not in the EEG, c) is in the EEG, but not in our data, or d) is in the data, but needs more complex and novel methods of analysis.'"

In the past two years I have had an experience of dreams that would never occur if prevailing neuroscience dogmas were true. In the very long post here (entitled "I Keep Dreaming of Danger, Death, the Deceased and Life After Death") I describe more than 300 dreams I had seeming to symbolically suggest the idea of life after death. Such a series cannot be credibly explained by any materialist ideas, for reasons I discuss in my post here. Besides such dreams, which are dreams of a philosophical type, I sometimes have other types of philosophical dreams, such as a dream pondering the fine-tuning of the universe's fundamental constants, and a dream pondering biological complexity, one in which I correctly remembered the human body has about 200 types of cells and about 20,000 different types of protein molecules. Having no credible ideas of how a waking person could have abstract ideas, neuroscientists cannot even credibly explain philosophical thinking from an awake person, and under their dogmas philosophical thinking while dreaming is something never to be expected.

How did our professors and science writers go so wrong, by teaching for so long the theory that the mind is a mere product of the brain and that memory is a brain effect, a theory of the mind so dramatically incompatible with so many observations? I can explain it sociologically with a physical metaphor: such persons were kind of snowflakes gathered up by a giant rolling snowball. The way in which ivory tower theories pick up supporters over the years has been described as a snowball effect, one in which the bigger the downward rolling snowball, the more snowflakes are picked up by the snowball. Gaining countless followers mainly because of its mere popularity, the giant rolling snowball of "brains make minds" kind of merged with another giant rolling

- sharp wave ripples
- short lifetime of synapses
- short lifetimes of brain protein molecules
- short lifetimes of dendritic spines
- simulation hypothesis
- so-called psychiatric brain surgery
- sociology of science
- source of thoughts
- speed of human minds
- speed reading
- Spiritualism
- split-brain operation
- stem cells
- strokes
- synapse theory of memory
- synapses
- synaptic mapping
- synaptic plasticity
- synaptic turnover
- T-maze
- teleospiritism
- telomeres
- terminal lucidity
- top-down theory of mind
- transhumanism
- transposition of senses
- traumatic brain injury
- unnecessary brain scans
- unreliability of synaptic transmission
- unreliable neuroscience techniques
- vaccines
- videos
- visual recognition
- Y-mazes

snowball gaining countless followers mainly because of its mere popularity: the giant rolling snowball of Darwinism. The combined downward-rolling snowball of Darwinist materialism continues to gain countless followers almost entirely because of its size, just as the bigger the snowball rolling down a mountain, the more snowflakes it sucks up.

But it's a funny thing about giant snowballs rolling down mountains: eventually they stop rolling, and later even in cold climates they tend to melt in the summer. If enough people give enough study to topics and observations that have been senselessly ignored or swept under the rug (the type of things discussed on this blog), then the sociological snowball that is Darwinist materialism will eventually be mostly melted by a glorious summer enabled by the sun of truth.

at December 10, 2022 No comments:

Labels: brain shortfalls, brain signal speed, ESP, hemispherectomy, high mental function despite large brain damage, memory recall, memory storage, near death experiences, out-of-body experiences

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Sunday, October 30, 2022

Misleading Claims in Attempts to Naturally Explain Near-Death Experiences and Out-of-Body Experiences

Near-Death Experiences and Out-of-Body Experiences: Phenomena Defying "Brains Make Minds" Claims

The dogma that our minds are produced by our brains is a dogma that makes some very definite predictions. One prediction of such a dogma is that human mental activity should completely stop both after someone dies and after someone's brain shuts down. During cardiac arrest, a person will "flatline." Not only will his heart stop beating, but his brain waves will also stop within 2 to 20 seconds after his heart stops. This means the brain has stopped working. Unless the person is revived through medical resuscitation efforts, he will die.

But contrary to the predictions of the dogma that minds are produced by brains, it is often found that mental activity continues after both the heart and the brain have shut down. Such events are called near-death experiences.

Near-death experiences first came to widespread public consideration in the 1970's with the publication of Raymond Moody's 1975 book *Life After Life*. Patching together elements from different accounts, Moody described an archetypal typical near-death experience, while noting that most accounts include only some elements in the described archetype. The archetype NDE included elements such as a sensation of floating out of the body, feelings of peace and joy, a life-review that occurs very quickly or in some altered type of time, a passage through a tunnel, an encounter with a being of light, and seeing deceased relatives. Accounts of near-death experiences and out-of-body experiences actually appeared before Moody's book, as you can read about here. The pages here and here describe out-of-body experiences of the nineteenth century. The page here lists a nineteenth century near-death experience involving the "life review" so often reported in near-death experiences. The page here (from a 1972 book) mentions four cases of someone being told that he or she must "go back" during an out-of-body experience, a common element in near-death experiences.

A study on near-death experiences was published in the British medical journal *The Lancet* in 2001. The study interviewed 344 patients who had a close encounter with death, generally through cardiac arrest. 62 of those reported some kind of near-death experience. 15 reported an out-of-body experience, 19 reported moving through a tunnel, 18 reported observation of a

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- Why the Instantaneous Recall of Old Memories Should Be Impossible for a Brain
- Cases of High Mental Function Despite Large Brain Damage
- Reasons for Doubting a Brain Could Do the Super-Complex Encoding Needed to Neurally Store Episodic Memories or Concepts
- The Promissory Notes of Materialist Professors Are Long Past Due
- Study Finds No Correlation Between Number of Neurons and IQ
- The Many Cases Showing a Person's Mind Can Operate When His Brain Has Shut Down

celestial landscape, 20 reported meeting with deceased persons, and 35 reported positive emotions.

The AWARE study was published in 2014 in the journal Resuscitation. It was entitled, "AWARE—AWAreness during REsuscitation—A prospective study." The URL can be found here.

The AWARE study name is an acronym for *awa*reness during *re*suscitation – the type of resuscitation that takes place when a person has a heart attack (cardiac arrest) and almost dies. The study collected data at 15 different hospitals, and was carried on over the course of four years. The study attempted to gather accounts of people's recollections in hospitals after they had very close encounters with death, typically during a heart attack or cardiac arrest. Over 2000 cardiac arrest cases were studied, and there were only 330 who survived to leave the hospital. Of those 330, only 101 met eligibility requirements, agreed to be interviewed, and also agreed to "stage 2" interviews.

So the study ended up with a group of only 101 persons who had experienced a close encounter with death, generally because of a cardiac arrest. Of this pool of 101 persons, 22% answered "Yes" to the question, "Did you have a feeling of peace or pleasantness?" 13% answered "Yes" to the question, "Did you feel separated from your body?" 13% answered "Yes" to the question, "Were your senses more vivid than usual?" 8% answered "Yes" to the question, "Did you seem to encounter a mystical being or presence, or hear an unidentifiable voice?" 7% answered "Yes" to the question, "Did you seem to enter some other, unearthly world?" Only 3% answered "Yes" to the question, "Did you see deceased or religious spirits?"

These results are corroboration of published accounts of what typically happens in a near-death experience, although the numbers are smaller than those reported in the Lancet study. As discussed here, the AWARE study does quote one respondent who gives an account very much like what has been published in previous books on near-death experiences:

"I have comeback from the other side of life. ..God sent (me) back,it was not (my) time — (I) had many things to do. ..(I traveled) through a tunnel toward a very strong light, which didn't dazzle or hurt (my) eyes. ..there were other people in the tunnel whom (I) did not recognize. When (I) emerged (I) described a very beautiful crystal city. .. there was a river that ran through the middle of the city (with) the most crystal clear waters. There were many people, without faces, who were washing in the waters. ..the people were very beautiful. .. there was the most beautiful singing. ..(and I was) moved to tears. (My) next recollection was looking up at a doctor doing chest compressions."

While the AWARE study did not find a very large number of cases of near-death experiences, the study did seem to "hit the jackpot" in regard to one case of a 57-year-old patient who said that he floated out of his body while being revived from his cardiac arrest. The man said that a woman appeared in a high corner of the room, beckoning him to come up to her. He said that despite thinking that was impossible, he found himself up in the high corner of the room, looking down on the medical team trying to revive him. The man described specific details of the revival efforts, including the presence of a bald

- A Soul Might Explain Instincts, but DNA and Brains Cannot
- Five Hallmarks of an Information Storage System (None of Which Your Synapses Have)
- Your Physical Structure Did Not Arise Bottom-Up, So Why Think Your Mind Did?
- Why a "Mechanical Memory" Theory Does Not Work
- The Brain Seems to Have No Mechanism for Reading or Writing Memories
- No One Understands How a Brain Could Generate Ideas
- Prevailing Brain Dogmas Cannot Explain Hypnotic Phenomena
- 30 Reasons for Rejecting the Theory of Neural Memory Storage
- Common Experiences That Show the Untruth of Professorial Memory Claims
- Neuroscience Research Customs Guarantee an Abundance of Junk Science
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- The Social Construction of Eager Community Mirages
- Preprint Server Counts Suggest Engrams Are Not Really Science
- Engrams Are Touted Like Phlogiston Was Once Touted
- Synaptic Delays Mean Brain Signals Must Move at a Snail's Pace
- Raven Smarts Defy Prevailing Brain Dogmas
- No One Can Credibly Explain Why a Brain Would Store a Memory in One Specific Spot
- Brain Dogmas Versus Case Histories That Refute Them
- Inaccurate Titles and Misleading Citations Are Common in Science Papers
- In Neuroscience Papers Bluffing Is More Common Than Candor
- Young Age of Languages Contradicts Claims of Neural Storage of Linguistic Information
- Vacillating Disarray of the Memory Trace Theorists
- Study Finds "Poor Overall Reliability" of Brain Scanning Studies
- "Brains Store Memories" Dogma Versus the Reality of Noisy Brains
- The Brain Has Nothing Like 7 Things a Computer Uses to Store and Retrieve Information

fat man with a blue hat, a nurse saying, “Dial 444 cardiac arrest,” his blood pressure being taken, a nurse pumping on his chest, a doctor sticking something down his throat, and blood gases and blood sugar levels being taken.

Here is what the AWARE scientific paper said in regard to the accuracy of these recollections:

"He accurately described people, sounds, and activities from his resuscitation...His medical records corroborated his accounts and specifically supported his descriptions and the use of an automated external defibrillator (AED). Based on current AED algorithms, this likely corresponded with up to 3 minutes of conscious awareness during CA [cardiac arrest] and CPR."

So here is a man who had a heart attack, and should have been unconscious during the medical efforts to revive him. Instead he accurately describes the details of what happened. Moreover, he claims that he observed these details while in a position above his body, in the high corner of the medical room. What we have here is what seems like a good-as-gold vintage “out of the body experience,” one with details that have been verified. This is an example of what is called a veridical near-death experience – one with observations that were subsequently verified.

In terms of its credibility and evidence value, the case may rival the famous Pam Reynolds case. At the time of her brain operation, the late Pam Reynolds was a 35-year old who had a large brain aneurysm. She underwent a very complicated operation that involved pumping out her blood and chilling her body temperature to only 60 degrees. Some twenty medical personnel worked on the complex operation.

After the successful operation was over, Reynolds reported having a near-death experience during the operation. She reported floating out of her body, and witnessing her operation. She accurately reported details of some medical equipment that was used to cut her skull open, describing it as a “saw thing...like an electric toothbrush,” with “interchangeable blades” that were stored in “what looked like a socket wrench case.” She reported someone complaining that her veins and arteries were too small. These details were later verified. This was despite the fact that during the operation Reynolds eyes were covered throughout the operation, and her ears were plugged with earplugs delivering noise of 40 decibels and 90 decibels (not to mention that her body was chilled to a level at which consciousness should have been impossible).

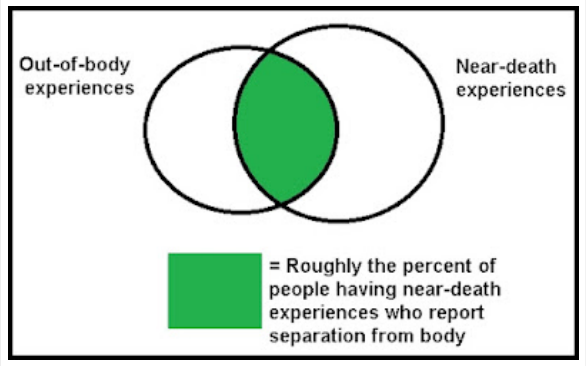
Reynolds said that she then encountered a tunnel vortex, saw an incredibly bright light, heard her deceased grandmother calling her, and encountered several of her deceased relatives. Reynolds says she was told by her uncle to go back through the tunnel, and to return to her body. These details were originally reported in the 1998 book *Light and Death* by Michael Sabom MD. That book includes diagrams of the medical equipment used to cut open Reynold's skull. They match her descriptions very well.

Many people have heard of one or two of these veridical near-death experiences, perhaps the Pam Reynolds case or the often-told story about “Maria's shoe.” But judging from the book *The Self Does Not Die: Verified*

- Exhibit A Suggesting Scientists Don't Understand How a Brain Could Store a Memory
- The Dubious Dogma That Brains Make Decisions
- Long Article Tries to Show Neural Memory Storage, but Gives No Real Evidence for It
- How Evidence for ESP Undermines the “Minds Come From Brains” Dogma
- Gender Differences in Brains Help Discredit Prevailing Dogmas About Brains
- Study Finds Equal Brain Connectivity in All Mammals
- Some Reasons the Main Theory of Neural Memory Storage Is Unbelievable
- Scientists Can't Persuasively Explain How a Brain Could Instantly Retrieve a Memory
- The Lack of Evidence for Memory-Storage Engram Cells
- Candid Confessions of the Cognition Experts
- Global Workspace Theory Sure Isn't an Explanation for Consciousness
- When Animals Cast Doubt on Dogmas About Brains
- Memories Can Form Many Times Faster Than the Speed of Synapse Strengthening
- The Guy with the Smallest Brain Had the Highest IQ
- He Had Half a Brain and Above Normal Intelligence
- The Truth About Neurons and Synapses
- A Diagram of Explanatory Dysfunction in Academia
- The Brain Shows No Sign of Working Harder During Thinking or Recall
- More Evidence of High Mental Function Despite Large Brain Damage
- The Lack of a Viable Theory of Neural Memory Encoding
- More Evidence That Neuron Loss Has Little Effect on Cognition
- Fraud and Misconduct Are Not Very Rare in Biology
- Reasons for Doubting Thought Comes from the Frontal Lobes or Prefrontal Cortex
- Why Most Animal Memory Experiments Tell Us Nothing About Human Memory
- Other Evidence of Human Paranormal Abilities

Paranormal Phenomena from Near-Death Experiences, these veridical near-death experiences may not be so rare. That book describes many cases similar to that of the Pam Reynolds case. My post here gives a summary of the main cases that book discusses. That post discusses many cases in which people correctly observed things during near-death experiences that should have been quite impossible for them to have observed, given their location and medical condition.

A phenomenon that overlaps with near-death experiences is out-of-body experiences, in which a person reports either leaving his body and going far away from it, or viewing his body while not in his body. The diagram below roughly shows the relation between near-death experiences and out-of-body experiences. A person can have an out-of-body experience without being close to death. The fraction depicted below (about 25%) roughly corresponds to data from the AWARE study, in which there were 55 subjects reporting awareness during a cardiac-related near-death experience, and 13 of them answered "Yes" to the question "Did you feel separated from your body?"


Out-of-body experiences
Near-death experiences
= Roughly the percent of people having near-death experiences who report separation from body

The diagram above merely shows a rough estimate of the percentage of people having near-death experiences who report out-of-body experiences. The question of what such a percentage may be is clouded by the fact that those having near-death experiences may report being in a kind of different body from their earthly body. In the paper *The Phenomenology of Near-Death Experiences* by Bruce Greyson and Ian Stevenson, which examined in depth 78 near-death experiences, we have this very interesting quote:

"The impression of having some sort of nonphysical body separate from the physical body was reported by 58% of our respondents (77% of those reporting out-of-the-body experiences)."

Pages 34-38 of the book *Out of Body Experiences; A Handbook* describes how out-of-body experiences have been reported for centuries in cultures all over the world. We read, "In 1978 a cross-cultural study by Shiels revealed that only three of 44 societies did not hold a belief in OBEs." There is a large body of literature involving people who claimed to have had out-of-body experiences. Many accounts can be found in the various editions of the Journal and Proceedings of the British Society for Psychical Research and the American Society for Psychical Research (including the account described here). A long account of out-of-body experiences was given in the 1929 book *The Projection of the Astral Body* by Sylvan J. Muldoon, which you can read here. In the 1960's and 1970's the scholar Robert Crookall PhD collected many accounts of out-of-body experiences. His works on the topic include these:

- Why Brains Are Not Suitable for Storing Long Sequences Like Humans Remember
- Why Brain Scans Don't Show Brains Make Minds
- Why Strokes, Alzheimer's Disease and Drunkenness Don't Prove the "Brains Make Minds" Dogma
- Synaptic Density Studies Contradict the Most Popular Memory Theory
- The Rare "Total Recall" Effect That Conflicts with Brain Dogmas
- Physical Connections Do Nothing to Explain Cognition
- The Sociological Reasons Why Bad Explanations Persist in Academia
- Split-Brain Cases Conflict with "Brains Make Minds" Dogma
- Why So Much of Neuroscience News Is Unreliable
- An Analogy Clarifying Why the "Brain Stores All Your Memories" Dogma Is Untenable
- Why Darwinism Fails to Explain the Human Mind
- What Is It That a Brain Does?
- Cloud Computing and a Non-Local Model of Consciousness
- Why We Do Not Understand the Origin of Complex Biological Innovations
- Our Minds May Arrive Top-Down Not Bottom-Up
- Fancy New Technology Fails to Prove Memory Dogmas
- The Argument for Determinism Collapses Once We Discard the "Minds Come from Brains" Dogma
- Animal Experiments Conflicting with the Dogma That the Brain Stores All Memories
- Memory Recall Reality Versus the "We Can't Remember Well" Bunk of Professors
- Neuroscientists Keep Using Misleading Coloring in Brain Visuals
- Most Scientists Don't Follow Formal Evidence Standards, Unlike Judges
- Experimental Evidence for ESP Is Well-Replicated
- Imaging of Dendritic Spines Hint That Brains Are Too Unstable to Store Memories for Decades
- NIH Bets $1,434,188 That Synapses Don't Store Memories
- A New Case of Very Large Brain Damage and Normal Mental Function
- When Clue-Blind Professors Ignore All the Signs

- *The Supreme Adventure* (1961), which you can read here.
- *The Techniques of Astral Projection* (1964), which you can read here.
- *More Astral Projections* (1964), which you can read here.
- *Out-of-the-Body Experiences* (1970), which you can read here.

The *More Astral Projections* book gives about 160 cases of out-of-body experiences. In the accounts collected by Crookall, a large fraction or most of those reporting out-of-body experiences reported being in a kind of second body (what can be called a soul-body), with such a thing often mysteriously connected to the physical body by a kind of kind of link or cord, one often described as elastic.

A very important point to remember is that in general neuroscientists are almost never serious scholars of paranormal phenomena. So if you ever hear a neuroscientist make generalizations about near-death experiences or out-of-body experiences, with very high likelihood you will be hearing someone talking about a topic he has not seriously studied.

Misleading Claims in Attempts to Neurally Explain Near-Death Experiences

There are two ways in which materialists attempt to deal with reports of paranormal phenomena:
(1) They may pretty much ignore the phenomena, say little or nothing about it, and hope that the public pays no attention to it.
(2) They may attempt to offer some evidence that they think may help to explain away the phenomena.

Materialists have figured out that method (1) above does not work for near-death experiences, because near-death experiences are too well known. So they have made some attempt along the lines of method (2) above. There is a tiny mini-body or micro-body of papers and articles attempting to offer evidence for a neural explanation or some kind of neural account for near-death experiences. A typical feature of such papers and articles in dishonesty and distortion.

Let's look at some of the papers most commonly cited in articles attempting to make it sound like there is some neural account to be told clarifying near-death experiences. Most of these articles cite a 2013 paper with the very misleading title "Surge of neurophysiological coherence and connectivity in the dying brain." The paper makes a misleading use of the technical EEG terms "coherence" and "connectivity."

An EEG is a device for measuring brain waves, one requiring the attachment of multiple electrodes on the head. In the technical jargon of EEG analysts, "coherence" means some length of time in which you are getting the same type of brain waves from two different regions of the brain. The paper here states, "Coherence is one mathematical method that can be used to determine if two or more sensors, or brain regions, have similar neuronal oscillatory activity with each other." There are different ways in which the term "connectivity" is used by neuroscientists. One of these ways is "structural connectivity" meaning the number of connections between brain cells. But, according to that paper, there's another way in which "connectivity" is used: "*Functional*

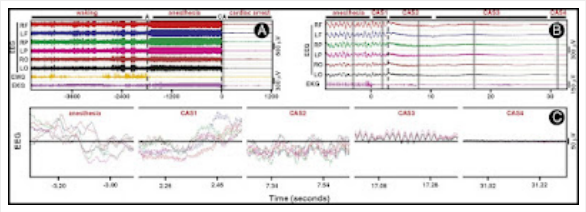
- Why Neuroscience Hasn't Delivered for Psychiatry
- Panpsychism Arguments Involve an Equivocation Fallacy
- He's Strangely Seeking Memories in Cells Below the Neck
- Just Call Them "Machine-Metaphor-Misguided"
- Way Off in Their Predictions, Neuroscientists Keep Misdescribing Human Memory Performance
- The Biggest Brain Projects Are Still Failing to Support Prevailing Brain Dogmas
- A New Paper Reminds Us Neuroscientists Can't Get Their Story Straight About Memory Storage
- NSF Grant Tool Query Suggests Engrams Are Not Really Science
- Suspect Shenanigans When You Hear Claims of "Mind Reading" Technology
- No, a USC Team Did Not Show "How Memories Are Stored in the Brain"
- Why ESP Discredits the "Brains Make Minds" Claim
- Beware of Neuroscientists Using Cell Nicknames
- The Press Often Gives Us Fake News About Brains
- No Solid Principle Justifies "Brains Make Minds" Thinking
- "Thousands of Participants Are Needed for Accurate Results," But Most Brain Scan Studies Don't Even Use Dozens
- Why the Academia Cyberspace Profit Complex Keeps Giving Misleading Brain Research Reports
- "Brains Make Minds" Idea Flunks an Audit of a Large Brain Scan Database
- Big Study Finds Brain Gray Matter and Cortical Thickness Peak at Age 6 or Earlier, Contradicting Brain Dogmas
- Why the "A Memory Is Stored Throughout the Brain" Idea Makes Things Much Worse
- Principles of a Post-Materialist Science
- EEG Studies Fail to Provide Robust Evidence That Brains Think or Retrieve Memories
- Seven Things in Fast Retrieval Systems, None of Which Your Brain Has
- Studies Debunk Hippocampus Memory Myths
- 11 Authorities Seem to Realize That "Your Brain Is a Computer" Is a Junk Metaphor

connectivity identifies activity brain regions that have similar frequency, phase and/or amplitude of correlated activity."

So given such speech customs, a neuroscientist analyzing the ups and downs of brain waves can claim "coherence" or "connectivity" as long as he sees any type of similarity between different regions of a brain giving the same kind of EEG readings. This is what the authors of the 2013 paper did. What they observed was simply the brain waves of rats quickly dying off to become a flat line. But because the brain waves from each regions quickly trailed off and died off in the same way, the authors have called this behavior "coherence" and "connectivity."

While this may not be a very clear case of an outright lie (given the speech habits of EEG analysts), the title of the paper is misleading, because it creates a very false impression in the minds of 95% of the people who read it. 95% of the people reading a title of "Surge of neurophysiological coherence and connectivity in the dying brain" will think that some indication was found of increased cognitive activity in dying brains. The paper found no such thing. The "coherence" and "connectivity" supposedly found was not a surge but merely a blip, and it did not involve anything like some surge of mental activity. Nothing whatsoever was found that can help to neurally explain near-death experiences. In fact, there is every reason to think that the at time when this little blip of claimed "coherence" and "connectivity" occurred, all of the rats were unconscious.

Figure 1 of the paper is shown below. We see EEG brain wave signals from rats who were injected with a chemical causing the heart to stop.



Nothing impressive is seen. It's just what you would expect: brain signals trailing off and dying out very quickly after the heart stops. This data offers no justification for a title of "Surge of neurophysiological coherence and connectivity in the dying brain." An honest title of the paper would have been: "Brain waves very quickly trail off and die out after hearts stop in rats."

After this paper with a misleading title was published, we had innumerable misleading citations of it in the articles of materialist or mainstream writers, claiming or insinuating that the paper showed or suggested something it did not either show or suggest. An example was a National Geographic article with the misleading title "In Dying Brains, Signs of Heightened Consciousness." The 2013 "Surge of neurophysiological coherence and connectivity in the dying brain" paper had not anything whatsoever to show "signs of heightened consciousness" in the dying rats it studied. Similarly, a 2017 Big Think article linked to the 2013 paper and claimed, "One 2013 study, which examined electrical signals inside the heads of rats, found that the rodents entered a hyper-alert state just before death." This claim is totally false, and the paper suggested nothing of the sort.

- Don't Be Fooled: Well-Trained Chatbots Aren't Minds
- What the Neuroscientist Should Have Said When Asked About Mind Uploading
- Cognitive Effects of Epilepsy Surgery Clash with "Brains Make Minds" Dogma
- Evolution Does Not Explain DNA, DNA Does Not Explain Bodies, and Bodies Do Not Explain Minds
- "Brain Chemical Imbalance" Theory Is Fading Out as an Explanation for Mental Illness
- Why Plasticity and Neurogenesis Fail to Explain Minds That Work Well After Massive Brain Tissue Loss
- They're Calling It a Huge Memory Research Fraud, But Is It Only the Tip of the Iceberg?
- So Much Misleading Talk Occurs in Claims of a Scientific Consensus
- Shrink-Speaking About a Mere "Problem of Consciousness" Is As Wrong As Shrink-Speaking About a Mere "Problem of Human Shape Origination"
- Longtermism Is Fueled by a Goofy Belief in Computer-Generated Lives
- Given Their Narrow Studies and Slim Narrow PhD Dissertations, Why Are We So Swayed by Neuroscience PhDs?
- Some of the Weak Papers Neuroscientists Cite As Evidence for Their Chief Claims
- For Insight About Your Brain and Mind, Ponder the Never-Founds
- TV Medical Dramas Give Us Wrong Ideas About Minds and Death
- Brain Imaging Shows No Appreciable Neural Correlates of Memory Activity
- The Evidence Inversion Syndrome Blights Academia
- Poorly Designed Brain Scan Experiments Needlessly Put the Needy at Risk
- Science Literature Is Full of Misleading Claims About Brain Waves
- The US Government's False Claims About DNA
- If Neuroscientists Acted Like Cosmologists, They Might Say You Have an Invisible "Dark Brain"
- Exceptionally Fast Thinking Cannot Be Explained by Slow Brains Like We All Have
- Scientists and Clergy Have Much in Common
- 30 Things That Would Never Occur If Prevailing Neuroscientist Dogmas

These days this kind of thing goes on constantly in the world of science journalism and materialist apologetics:
(1) Scientists often give their papers titles that are not justified by anything they observed (partially to maximize their chance of getting the paper citations that scientists crave).
(2) Journalists adding an additional layer of hype, distortion and misrepresentation, by claiming the papers showed or suggested something that the papers did not provide any good evidence for. It's a "give 'em an inch, and they'll take a mile" kind of situation. For example, if a scientific paper mildly suggests that just maybe some odd observations could have been produced by extraterrestrials, the paper will be mentioned in dozens of new stories breathlessly claiming that scientists have shown extraterrestrials exist.

The 2013 paper was discredited by a 2017 paper "Electroencephalographic Recordings During Withdrawal of Life-Sustaining Therapy Until 30 Minutes After Declaration of Death." That 2017 paper studied the brain waves of four humans who died after their hearts stopped. Referring to the 2013 paper, the 2017 paper stated, "We also did not observe any well-defined EEG states following the early cardiac arrest period as previously reported in rats." But in the articles of those trying to portray some neural explanation for near-death experiences, we read no mention of this 2017 paper. Such articles keep citing the 2013 study involving rats, but won't tell us about a more relevant 2017 study involving humans.

An outrageous 2022 example of fake news was a recent story in the British new source The Independent, a story with the phony headline, "Brain scan reveals patient's 'last thoughts' just before they died in landmark study." Below are some of the reasons the headline and the story are as phony as a three-dollar bill:

- The scientific study ("Enhanced Interplay of Neuronal Coherence and Coupling in the Dying Human Brain") made no claim to have revealed the thoughts of the dying 87-year-old patient, nor did it even make any guess about such a thing.
- No one is quoted in the article referring to last thoughts.
- The headline uses the phrase "just before they died," suggesting there were multiple patients involved in the new study; but there was only one patient.
- The patient did not actually have his brain scanned as he died. Brain scans are done with MRI machines, and the patient was not being scanned in an MRI machine or any similar machine when he died. Instead, there was a merely a reading of electrical activity by means of EEG electrodes.
- There was nothing "landmark" about the study, as there have been electrode readings of the brain activity of numerous previous patients as they died. The subtitle of the story makes the untrue claim that there were "first-of-a-kind brain scans," when nothing "first-of-a-kind" was done, and no brain scan was done.
- There are very strong reasons for assuming that the patient in question was unconscious in the moments before death, and that he therefore was not thinking about anything just before dying.

A Frontiers press release is guilty of getting the ball rolling on this fake news story, by suggesting the utterly groundless idea that the EEG readings from a

Were True
- "Brains Make Minds" Models All Flunk a Large Brain Scan Study
- The Philosophy of Teleospiritism
- The Biggest Blunders of Theories Such as Integrated Information Theory
- Study Finds No Robust Link Between Brain Structure and Personality
- The Two Huge Mistakes Involved in Typical Talk of a "Hard Problem of Consciousness"
- Neuroscientists Keep Wrongly Assuming the Source of Something Must Be Near Its Observed Manifestations
- The Vague Unfounded Boasts of Biology Sound Like the Vague Unfounded Boasts of Astrophysics
- 8 Reasons for Doubting Claims of the Heritability of Intelligence
- Widely Read Scientific Paper Asks, "What If Consciousness Is Not an Emergent Property of the Brain?"
- Exhibit A Suggesting Scientists Don't Know How a Brain Could Retrieve a Memory
- Exhibit B Suggesting Scientists Don't Know How a Brain Could Retrieve a Memory
- More Indications Scientists Don't Understand How a Brain Could Think or Remember
- Studies New and Old Fail to Show a Big Link Between Brain States and Minds
- Free E-book: Failing Dogmas of Brain Researchers
- Wobbly Hand-Waving Guesswork of the Synapse Memory Theorists
- Cryogenic Electron Microscopy Helps Clarify Synapses Bear No Resemblance to Information Storage Structures
- Did a Stealth Religion Infiltrate Academia?
- Human Thoughts and Memory Are Gigantically Connective, But Brains Have Only Low Connectivity
- Exhibit A Suggesting Scientists Have No Understanding of How a Brain Could Imagine Anything
- There Is No Evidence of a Neural Explanation for Out-of-Body Experiences
- Misleading Claims in Attempts to Naturally Explain Near-Death Experiences and Out-of-Body Experiences
- The Latest Evidence That Scientists Trying to Explain Memory Creation

seizure-wracked dying patient in a coma did something to suggest the patient was recalling events in his life. Here is a quote from the press release:

" 'We measured 900 seconds of brain activity around the time of death and set a specific focus to investigate what happened in the 30 seconds before and after the heart stopped beating,' said Dr Ajmal Zemmar, a neurosurgeon at the University of Louisville, US, who organised the study. 'Just before and after the heart stopped working, we saw changes in a specific band of neural oscillations, so-called gamma oscillations, but also in others such as delta, theta, alpha and beta oscillations.' Brain oscillations (more commonly known as 'brain waves') are patterns of rhythmic brain activity normally present in living human brains. The different types of oscillations, including gamma, are involved in high-cognitive functions, such as concentrating, dreaming, meditation, memory retrieval, information processing, and conscious perception, just like those associated with memory flashbacks. 'Through generating oscillations involved in memory retrieval, the brain may be playing a last recall of important life events just before we die, similar to the ones reported in near-death experiences,' Zemmar speculated. "

Notice the nonsense reasoning here. It's basically this:

(1) People have different types of brain waves, which occur when they do various things like thinking, recalling, meditating (which does not involve recall), and perceiving.

(2) Some brain waves were measured in a person who died.

(3) So maybe he was recalling important life events.

This is nonsensical logic. The study has not provided the slightest reason for thinking that the dying person was remembering past events in his life. To the contrary, we can think of the strongest reason why a person would not be recalling important life events after having a sudden heart attack. The sudden heart attack would produce great pain and great distress, and under such conditions if you were conscious you would be no more likely to be recalling past life events than you would be if someone suddenly stabbed you in the chest. In fact, sudden fatal heart attacks instantly produce unconsciousness which should prevent anyone from engaging in thinking about past events.

The scientific paper describes the patient's condition before death, and we learn of a state so dire that any speculation about the patient reliving past memories seems supremely absurd. We are told the patient was a 87-year-old who had suffered a fall, and who was in a coma (rating 10 on the Glascow Coma Scale, meaning a moderate coma). Here is how the paper describes the patient's death.

"An electroencephalography (EEG) was obtained, which showed non-convulsive status epilepticus in the left hemisphere. There were at least 12 identified electrographic seizures, after which a burst suppression pattern spontaneously developed over the left hemisphere (Figure 2A). Shortly thereafter, electrographic activity over both hemispheres demonstrated a burst suppression pattern, which was followed by development of ventricular tachycardia with apneustic respirations and clinical cardiorespiratory arrest. After discussion with the patient's family and in consideration of the 'Do-Not-Resiscitate (DNR)' status of the patient, no further treatment was administered and the patient passed away."

Are Lost in the Woods

- Study Suggests Massive Faking in Neuroscience Papers
- How Neuroscientists and Science Writers Try to Fool You Into Thinking Brains Store Memories
- Some People Our Neuroscientsts Don't Want You to Know About
- 10 Reasons Synapses Cannot Be a Storage Place for Human Memories
- Why Most Correlation-Fishing Experimental Neuroscience Is Worthless
- Pharmaceutical Company Entanglements Cloud the Objectivity of Neuroscientists and Psychiatrists
- The 4 Nonsensical Parts of the Tale Your Brain Instantly Retrieved an Answer Learned Long Ago
- Neuroscientists Don't Seem Like Paragons of Diligence
- "Brain Is the Most Complex Object in Universe" Claim Exemplifies Credulity About Brain Claims
- Exhibit A That Scientists Have No Understanding of a Physical Basis of Human Memory
- Goofs of the Site Brainfacts.org
- Shady Tricks Used by Writers About the Brain
- The 11 Biggest Neural Shortfalls Hinting Brains Don't Make Minds
- Analysis of 23,810 Brain Scans Finds "Neither Structural Nor Functional Imaging Predicted Individual Psychology"
- All Papers Relying on Rodent "Freezing Behavior" Estimations Are Junk Science
- The Human Brain Project Spent Billions, But Failed to Bolster Claims About Brains Making Minds
- Hydrocephalus Studies Confirming Low Correlation Between Brain States and Intelligence
- The Lack of Evidence That Brains Produce Dreaming, and Some Evidence Hinting They Don't
- How the Academia-Cyberspace-Pharmaceutical-Biotech-Publishing Complex Incentivizes Bad Brain Research
- The Lack of Correlation Between Most Mental Illness and Brain States
- They Stored and Studied Thousands of Brains, But Still Failed to Show Mental Illness Comes From Sick Brains
- They Stored and Studied Thousands of Brains, But Still Failed to Show Brains Store Memories

Given such a patient state, it is obvious folly to be speculating that such a patient was reliving past memories just before death. Status epilepticus is a life-threatening seizure of particularly long length. Apneustic respirations are a kind of gasping suggesting death is very near. Twelve seizures would have produced a "witch's brew" of brain signals showing up on EEG readings, and from such a thunderstorm of brain signals nothing reliable can be inferred about what a patient was thinking or recalling. Since the patient was in a coma and plagued by a dozen seizures that disrupt mental processes such as recollection if it is occurring, it makes no sense at all to speculate that the patient was thinking about or recollecting anything.

Giving us a headline as phony as the headline quoted above from the Independent, the Daily Mail gives us this fake news headline about this patient: "Our lives really DO flash before us: Scientists record the brain activity of an 87-year-old man at the moment he died, revealing a rapid 'memory retrieval' process." This headline is as phony as a three-dollar bill. Zero evidence has been provided in the scientific paper of any memory retrieval around the time of death, and the patient's condition gives the strongest reason for disbelieving that any such thing was occurring. A similar fake news headline occurs on www.bbc.com, showing that once an expert lights a fake news match, the fake news fire will spread even to sources the average person regards as having high journalistic standards. Dozens of news site repeated the groundless claim that neuroscientists had used medical technology to show that someone's life flashes before their eyes when they are dying.

There is an abundance of reliable evidence that people have extraordinary near-death experiences after their hearts have stopped. Such experiences often include what are called life-review experiences, in which a person may recall important moments from his life. Neuroscience has done nothing to explain such near-death experiences, nor has neuroscience provided any evidence that such life reviews occur. We know they occur solely because of eyewitness testimony.

The paper here casts cold water on the "Enhanced Interplay of Neuronal Coherence and Coupling in the Dying Human Brain" paper discussed above, implying that whatever it observed may have been an artifact of muscle movement, which produces confounding signals in EEG readings.

Misleading Claims in Attempts to Neurally Explain Out-of-Body Experiences

Misstatements about out-of-body experiences are common in papers and articles written by those trying to naturally explain such experiences. An example is to be found in the paper "The Out-of-Body Experience: Disturbed Self-Processing at the Temporo-Parietal Junction." The authors make this very erroneous claim: "OBEs have been observed predominantly in patients with epilepsy and migraine." No, out-of-body experiences do not mostly occur in people who have epilepsy or migraines.

The attempt of the authors to justify such a claim suggests a great shortfall of scholarship on this topic. After making the extremely untrue statement above, they try to justify it by claiming this: "Thus, Lippman (1953) reported two migraine patients with OBEs, and Green (1968) reported that 11% of the OBE subjects that participated in her survey suffered from migraine headaches." Any person who seriously studied out-of-body experiences would have found

- Major Journal Suggests 3% of Biology Papers Look Like Paper Mill Junk
- This Is What Built the Mighty Castle of Materialism
- Comparing the Dogmas of Cosmology and Biology
- Why Scientific Academia Is Like an Organized Religion
- How to Interview an Overconfident Biologist
- Neuroscientists Claim "Drifting Representations," But It's Mainly Just Their Pareidolia
- Neuroscience "Best of 2023" Reviews Suggests They're Getting Nowhere Trying to Explain Minds by Neural Explanations
- Convoluted "Spaghetti Code" Analysis Pathways Help Neuroscientists Conjure Phantasms That Don't Exist
- 50 Types of Questionable Research Practices
- Cox's Cases Were Better Explained as Evidence Brains Don't Make Minds
- No, Scientist, That Isn't Human Memory or Brain Action, But Merely Computer Activity
- You Would Never Guess From Her Videos That She Has No Frontal Lobes
- Neuroscientists Often Sound Like They Never Seriously Studied Psychical Research
- DNA Is Not a Blueprint, So "All Bets Are Off" About Body Origins and Mind Origins
- Universities Continue to Boast About Pitifully Weak Neuroscience Results
- A Biochemist's Promissory Note About Explaining Minds Sounds Very Lame
- No One Is Actually Doing Thought-Reading by Scanning Brains or Reading Brain Signals
- A Biologist Calls "Orthodox Science" a "Religion" and "Belief System"
- She Has Photographic Memory and Severe Unmanageable Epilepsy
- Traumatic Brain Injury Results Clashing With Prevailing Dogmas About Brains
- "Cells With Minds" Theory Is As Bad As "Brains Make Minds" Theory
- Surprising Studies on Memory Loss or IQ Changes After Brain Surgery or Brain Damage
- Pareidolia Helps Neuroscientists Getting Nowhere Trying to Show a Brain Basis for Memory

out that surveys report them occurring in significant fractions of the human population, and would realize the utter folly of trying to justify a claim that out-of-body experiences are caused mainly by migraines or epilepsy by citing a mere two patients having migraines and out-of-body experiences. And anyone writing carefully would have realized the folly of trying to justify a claim that *most* out-of-body experiences are produced by migraines or epilepsy by citing some person claiming that *merely 11%* of some group of people having out-of-body experiences had migraines.

Trying to claim that out-of-body experiences are largely caused by migraine headaches makes no sense. In a book about near-death experiences and out-of-body experiences (OBEs), Dr. Peter Fenwick states, "A prominent feature of OBEs is that pain is entirely absent." But since migraine headaches are episodes of intense pain, it makes no sense to claim they are the cause of painless out-of-body experiences. The source here discusses a variety of surveys taken to try to determine how common out-of-body experiences are. It gives numbers which suggest that out-of-body experiences occur to significant fractions of the human population, something like between 10% and 20%.

When materialists attempt to offer natural explanations for out-of-body experiences, what very often goes on is that experiences that are not out-of-body experiences are described as out-of-body experiences. The materialist is very eager to claim as many naturally-explicable experiences as out-of-body experiences. So he will try to use the term "out-of-body experience" to describe very many things, often things that do not have the characteristics of out-of-body experiences.

In psychiatry and neuoscience, there is a term "autoscopy," A paper states, "Autoscopy is thought to be a rare phenomenon in which a person visualizes or experiences a veritable hallucinatory image of his double." A paper states, "there is no disembodiment in autoscopy and always disembodiment in OBEs," although the later part of this statement is not correct, because in out-of-body experiences a person may report a kind of different body other than his physical body. A type of misleading statement that sometimes occurs is when materialists describe mere cases of autoscopy (which should not be called out-of-body experiences) as out-of-body experiences. These attempts to use evidence for autoscopy as part of trying to explain out-of-body experiences are misleading and also futile, because of the extreme rarity of reported cases of autoscopy, and the high incidence of cases of out-of-body experience.

Another example of misleading claims in attempts to naturally explain out-of-body experiences is when a researcher claims to experimentally produce an out-of-body experience. An example is the paper "The Experimental Induction of Out-of-Body Experiences." The paper describes a fancy high-tech experimental setup in which subjects are given something like virtual reality goggles. We read this:

"In the first experiment, participants sat on a chair, wearing a pair of head-mounted displays that were connected to two video cameras placed side by side 2 m behind the participant's back (Fig. 1A). The images from the left video camera were presented on the left eye display and the images from the right camera on the right display. Thus, the person would see his or her back

- HSAM Memory Whiz Subjects Scored 25 Times Higher on a Random Dates Test
- How High-Speed Life Reviews in Near-Death Experiences Discredit "Brains Make Minds" Claims and "Brains Store Memories" Claims
- More Indications That Scientists Have No Understanding of How a Brain Could Think
- Searching Hard for Evidence of Strokes Causing Loss of Episodic or Conceptual Memories, They Come Up Short
- Cognitive Neuroscience Is Floundering, So the Kavli 2024 Neuroscience Prize Went to Low-Quality Research
- We Cannot Trust Neuroscientists to Speak Accurately About What Brains Do and What Minds Experience
- The Mythology of "Memory Maintenance Molecules"
- No, Noise Miners, Neurons Don't Encode Words
- The Lack of Bodily Addresses Crushes the Credibility of Mechanistic Biology and Mechanistic Psychology
- She Didn't Seem to Need the Right Half of Her Brain, and Losing It Did Not Seem to Dim Her Memories
- 60+ Aspects of the Human Mind, and Whether Brains Explain Them
- Papers Claiming Brain Memory Storage Keep Citing Poor Science Papers
- A Report of "Unimpaired Faculties Without a Brain" (John Bly)
- Exhibit A That There Is No Such Thing as a Chemical Root of Consciousness
- Look Very Closely at a Study Claiming Thought Reading of Brains, and You'll Find the Shady Tricks Behind It
- UK Biobank Study of Thousands of Brains Finds Negligible Correlation Between Brain Size and Intelligence
- Neuroscientists Senselessly Think They Can Perform Innumerable Contortions of Brain Data, and Then Claim a Discovery
- They Mapped 150 Million Synapses, and Found No Sign of Stored Memories
- Brains Show No Physical Signs of Reading or Retrieval When You Recall Something
- In 1941 the Editors of Scientific American Confessed That Telepathy Was Proven
- Old Newspaper Stories Relevant to Whether Brains Make Minds

with the perspective of a person sitting behind him or her with stereoscopic vision."

The author gives no justification for his claim that this very fancy high-tech setup produced any out-of-body experience. The paper gives no account by anyone describing an out-of-body experience. What is going on here is some high-tech setup designed to create perceptual confusion in subjects. Since the high-tech setup bears no resemblance to anything people would experience in normal life, the experiment in worthless in explaining out-of-body experiences, which do not occur when people are wearing virtual reality goggles. The author should not have given his paper his paper the misleading title "The Experimental Induction of Out-of-Body Experiences." An honest title would have been something like "Induction of Perceptual Confusion by Special Goggles."

Another misleading and irrelevant paper claiming to have experimentally produced an out-of-body experience is the paper "Experimental Elicitation of an Out of Body Experience and Concomitant Cross-Hemispheric Electroencephalographic Coherence." This ethically questionable paper involved zapping the brain of a single subject with some special hat containing "64 solenoids (see Figure 1) obtained from Radio Shack," until a headache was produced in the subject. Experimenting with crudely constructed brain-zapping devices not approved by the FDA was morally dubious. The paper gives no quotation from the subject describing an out-of-body experience. We read this:

"The experience culminated with the subject feeling his head was floating above the spot where his body was sitting. He could not distinguish between his limbs, his torso, or the surrounding space and objects in the room. During this intense experience, he considered asking the experimenter to terminate the procedure. Following the experience there was noticeable fatigue and a headache developed."

This is a description of severe disorientation, confusion and pain, not matching what is reported in out-of-body experiences, in which people report painless clear perception of their body from a spot outside of their body. Since the paper does not include a first-hand account of the user's mental experiences, but merely a second-hand account of someone's mental experiences (one that may be biased by the experimenters' desire to report an out-of-body experience), the paper fails to provide any good evidence that an out-of-body experience occurred. Since the paper involves some high-tech brain-zapping setup unlike anything existing when ordinary people have out-of-body experiences, such a paper is worthless in explaining out-of-body experiences.

A similar paper (authored by one of the authors of a misleading paper mentioned above) is entitled "Stimulating illusory out-of-body experiences." The paper has some quotes by a subject in whom the authors had brain-zapped with electricity, by inserting electrodes in her brain. The authors have attempted to portray this as evidence of an artificially induced out-of-body experience. But the only sentence that the paper quotes from the subject is one that does not indicate a full out-of-body experience. That sentence is this: "I see myself lying in bed, from above, but I only see my legs and lower trunk." That sounds like some weird electricity-induced perception anomaly that is not properly described as an out-of-body experience. During an out-of-body experience a person will typically report leaving his body and seeing his

- Newspaper Accounts of Memory Marvels (Part 1)
- Why Your Brain Is Not Like a Computer
- They Memorized Many Times Faster Than a Brain Could Ever Do
- Faltering Neuroscientists Improperly Offer Computer Science Papers as Examples of Neuroscience Progress
- The Brains of 60 Subjects Seemed to Look the Same During Eyes Closed Mental Rest, Recall and Math Activity
- The Problem of Explaining Human Minds Is a Million Times Larger Than a Mere "Problem of Conscious Experience"
- Large Neuron Groups Cannot Be Sequentially Traversed, So Brains Cannot Store Complex Learned Information
- Eyes and Minds Can Focus, But Brains Cannot Physically Focus
- Most Subjects in Neuroscience Research Do Not Understand the Risks They Are Taking
- Neuroscientists Cannot Credibly Explain Any of These 11 Features of Out-of-Body Experiences
- Microscopes Will Never Find the Slightest Trace of Learned Information in a Human Brain
- Newspaper Accounts of Memory Marvels (Part 2)
- The Reason You Will Never Be Able to Upload Your Mind Is the Same Reason You Won't Ever Need To
- Brain Tumors Seem to Have Relatively Little Effect on Cognitive Function
- Newspaper Accounts of Memory Marvels (Part 3)
- They Mentally Calculated Faster Than a Brain Could Ever Do
- Claimed Evidence for "Concept Cells" Is Just Noise-Mining Nonsense
- More Candid Confessions of the Cognition Experts
- Neuroscientists Offer Only the Most Hazy Hand-Waving When Trying to Explain Memory
- List of Breakthrough Prize Winners in Life Sciences Hints at the Lack of Progress in Cognitive Neuroscience
- HSAM Wonder Daniel McCartney Was a Math and Memory Marvel
- LTP Research Has Done Nothing to Show Any Neural Basis for Memory Creation
- The Lack of Strong Links Between Mental Illness and Brain States

entire body (not just the legs and lower trunk) from outside of the body. Eager to report some experimental induction of an out-of-body experience, our authors seem to have taken some account that does not match those of out-of-body experiences, and called that an out-of-body experience. The authors make this claim: "Two further stimulations induced the same sensation, which included an instantaneous feeling of 'lightness' and 'floating' 'about two metres above the bed, close to the ceiling." Since this is not an actual full-sentence quote from the subject, it has no value as evidence. A second-hand account of a person's experience during brain zapping (by some other person who did not have that experience) is worthless as evidence. What would we have read from a transcript of what the subject said? We have no idea.

With the misleading stories and papers I have cited, neuroscientists and materialists are trying to make it look a little bit like they have some neural or natural explanation for near-death experiences or out-of-body experiences. They have no such thing. The phenomena of near-death experiences and out-of-body experiences are utterly inexplicable under the dogmas and assumptions of most neuroscientists and materialists, such as the dogma that the brain produces the mind or the dogma that mind states are mere brain states. All the things we see occurring in near-death experiences and out-of-body experiences are things that should not be occurring if such dogmas and assumptions are correct. Near-death experiences and out-of-body experiences are evidence that such dogmas and assumptions are incorrect. It would be hard to imagine a more resounding refutation of the dogma that your brain makes your mind than what is reported in out-of-body experiences: people observing their bodies from outside of their bodies.

Postscript: Another study pretending to offer some insight about out-of-body experiences is the 2023 study "Causal evidence for the processing of bodily self in the anterior precuneus" study I discuss at great length in my post here. Making several untrue statements about its own witness reports, the study tries to produce out-of-body experiences by brain zapping, but fails. None of its reports is an actual report of an out-of-body experience. What has gone on is that doctors interviewing brain-zapped subjects have used many a "leading question" to try to pull out of the patients something sounding a little like an out-of-body experience. In no case did they get what they were trying very hard to elicit. The closest they get is someone saying that a brain zapping produced in him a feeling that was "just kinda like got like thrown up on the clouds," a statement so weakly worded and poetical-sounding that it does not qualify as being a statement of an out-of-body experience. The whole idea of electrically zapping people's brains to try to explain out-of-body experiences is absurd, because the people reporting such experiences did not have their brains zapped when they had such experiences.

Another example of misleading statements is found in the article "Meditation-Induced Near-Death Experiences: a 3-Year Longitudinal Study." The title is misleading, because the mystical experiences discussed were not experiences occurring during any bodily danger. An experience that does not occur when someone is near death should not be called a near-death experience. We have here a study that is an example of researchers planting suggestions in the minds of subjects. First people engaging in deep meditation were recruited to join some group, with the expectation being raised that they would report something like a near-death experience. The people were told to contact one of the researchers as soon as they had something like a near-death experience,

- Subject MM Had a Stupendous Memory for Facts, But a Normal Brain
- Lighting-Fast Readers Exceed the Speed Limits of a Brain
- They Too Mentally Calculated Faster Than a Brain Could Ever Do
- They Did Well After a Huge Loss of Brain Tissue
- Newspaper Accounts of Memory Marvels (Part 4)
- NIH's Million-Dollar "Epigenetic Memory" Bet Fails
- The Myths About Patient K. C. and Patient H. M.
- He Had Half a Brain But "Superior Intelligence"
- New Poll Suggests About 29% of Neuroscientists Doubt the Synaptic Memory Theory
- They Lost Huge Parts of Their Brains, But Their Knowledge and Recollection Were Preserved
- The Groundless Myth That "Floods" or "Surges" Help Explain Near-Death Experiences
- Physically Unrealistic NEPTUNE "Model" of Near-Death Experiences Is a Misleading Mishmash

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May 2025 (8)

and upon making such a contact the people were then asked leading questions trying to elicit from them something sounding like a near-death experience. A study like this has little value as evidence unless it gives an interview transcript for each of the person's experience, or an account written by each of them. But we are given no such things. We are told that none of the participants reported two of the hallmarks of a near-death experience: speeded-up thinking and coming to some point of no return.

See my post here for a discussion of an extremely misleading article in The Guardian about near-death experiences. See the end of my post here for a discussion of why the 2017 study "Characterization of end-of-life electroencephalographic surges in critically ill patients" fails to provide any evidence of brain activity surges after a heart has stopped. The study was one that only had EEG data on brain wave activity, not any corresponding data on heart rate activity. The same post gives an example of misleading language by a neuroscientist describing a DMT drug trip, and unsuccessfully trying to make it sound rather like a near-death experience.

at October 30, 2022 No comments:

Labels: near death experiences, out-of-body experiences

Thursday, February 24, 2022

The Press Often Gives Us Fake News About Brains

A significant fraction of the neuroscience news these days contains exaggerations, extremely dubious interpretations or downright falsehoods. Sometimes these falsehoods are so brazen that they must be branded as fake news. An outrageous example of fake news was a recent story in the British new source The Independent, a story with the phony headline, "Brain scan reveals patient's 'last thoughts' just before they died in landmark study." Below are some of the reasons the headline and the story are as phony as a three-dollar bill:

- The scientific study made no claim to have revealed the thoughts of the dying 87-year-old patient, nor did it even make any guess about such a thing.
- No one is quoted in the article referring to last thoughts.
- The headline uses the phrase "just before they died," suggesting there were multiple patients involved in the new study; but there was only one patient.
- The patient did not actually have his brain scanned as he died. Brain scans are done with MRI machines, and the patient was not being scanned in an MRI machine or any similar machine when he died. Instead, there was a merely a reading of electrical activity by means of EEG electrodes.
- There was nothing "landmark" about the study, as there have been electrode readings of the brain activity of numerous previous patients as they died. The subtitle of the story makes the untrue claim that there were "first-of-a-kind brain scans," when nothing "first-of-a-kind" was done, and no brain scan was done.
- As discussed below, there are very strong reasons for assuming that the patient in question was unconscious in the moments

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May 2024 (6)
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August 2023 (5)
July 2023 (5)
June 2023 (3)
May 2023 (4)
April 2023 (5)
March 2023 (5)
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July 2021 (3)
June 2021 (2)
May 2021 (3)
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March 2021 (4)

before death, and that he therefore was not thinking about anything just before dying.

We don't need to read very far to find out how phony the story is. The headline claims "brain scan reveals patients 'last thoughts,'" but the subtitle states this: "First-of-a-kind brain scans of dying person indicate they may have been making 'last recall of life', scientists say." So the headline and the subtitle contradict each other. If scientists were merely speculating that the patient may have been recalling his life, then nothing has been actually *revealed* about what the patient was thinking. Of course, the idea that you can figure out someone's thoughts by looking at EEG readings is as nonsensical as the claim that you can find out someone's future life events by reading lines on his palms. EEG readings are mere squiggly lines without any semantic content.

The untrue "first-of-a-kind" claim is partially the fault of the Frontiers press release, which made this untrue claim: "This unexpected event allowed the scientists to record the activity of a dying human brain for the first time ever." You can very easily find out how untrue this claim is by using a Google search phrase of "EEG reading of dying patient," and using the Tools option to restrict the search results to be from 1/1/1990 to 1/1/2021. In your search results you will get papers such as the 2017 paper "Electroencephalographic Recordings During Withdrawal of Life-Sustaining Therapy Until 30 Minutes After Declaration of Death," and this 2017 press article about the study (which shows some of the EEG readings from four dying patients).

Besides making the untrue claim above, the Frontiers press release is guilty of getting the ball rolling on this fake news story, by suggesting the utterly groundless idea that the EEG readings from a seizure-wracked dying patient in a coma did something to suggest the patient was recalling events in his life. Here is a quote from the press release:

" 'We measured 900 seconds of brain activity around the time of death and set a specific focus to investigate what happened in the 30 seconds before and after the heart stopped beating,' said Dr Ajmal Zemmar, a neurosurgeon at the University of Louisville, US, who organised the study. 'Just before and after the heart stopped working, we saw changes in a specific band of neural oscillations, so-called gamma oscillations, but also in others such as delta, theta, alpha and beta oscillations.' Brain oscillations (more commonly known as 'brain waves') are patterns of rhythmic brain activity normally present in living human brains. The different types of oscillations, including gamma, are involved in high-cognitive functions, such as concentrating, dreaming, meditation, memory retrieval, information processing, and conscious perception, just like those associated with memory flashbacks. 'Through generating oscillations involved in memory retrieval, the brain may be playing a last recall of important life events just before we die, similar to the ones reported in near-death experiences,' Zemmar speculated. "

Notice the nonsense reasoning here. It's basically this:

(1) People have different types of brain waves, which occur when they do various things like thinking, recalling, meditating (which does not involve recall), and perceiving.

(2) Some brain waves were measured in a person who died.

(3) So maybe he was recalling important life events.

February 2021 (3)
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May 2020 (2)
April 2020 (1)
March 2020 (1)
February 2020 (2)
January 2020 (1)
December 2019 (1)
November 2019 (1)
September 2019 (1)
August 2019 (1)
July 2019 (2)
June 2019 (1)
May 2019 (1)
April 2019 (1)
February 2019 (1)
January 2019 (1)
December 2018 (1)
November 2018 (3)
September 2018 (1)
August 2018 (1)
July 2018 (1)
June 2018 (1)
April 2018 (30)

Labels

- "brain as computer" metaphor
- above-average IQ with huge brain tissue loss
- academia dysfunction
- acquired savant syndrome
- adult neurogenesis
- agenesis of corpus callosum
- aging
- AI
- Alzheimer's disease
- amnesia
- analytic idealism
- bad computer programming in neuroscience studies
- bad predictions by scientists
- bad psychiatric surveys
- bad psychiatry
- bilingualism with half a brain

This is nonsensical logic. The study has not provided the slightest reason for thinking that the dying person was remembering past events in his life. To the contrary, we can think of the strongest reason why a person would not be recalling important life events after having a sudden heart attack. The sudden heart attack would produce great pain and great distress, and under such conditions if you were conscious you would be no more likely to be recalling past life events than you would be if someone suddenly stabbed you in the chest. In fact, sudden fatal heart attacks instantly produce unconsciousness which should prevent anyone from engaging in thinking about past events.

The scientific paper describes the patient's condition before death, and we learn of a state so dire that any speculation about the patient reliving past memories seems supremely absurd. We are told the patient was a 87-year-old who had suffered a fall, and who was in a coma (rating 10 on the Glascow Coma Scale, meaning a moderate coma). Here is how the paper describes the patient's death.

"An electroencephalography (EEG) was obtained, which showed non-convulsive status epilepticus in the left hemisphere. There were at least 12 identified electrographic seizures, after which a burst suppression pattern spontaneously developed over the left hemisphere (Figure 2A). Shortly thereafter, electrographic activity over both hemispheres demonstrated a burst suppression pattern, which was followed by development of ventricular tachycardia with apneustic respirations and clinical cardiorespiratory arrest. After discussion with the patient's family and in consideration of the 'Do-Not-Resiscitate (DNR)' status of the patient, no further treatment was administered and the patient passed away."

Given such a patient state, it is obvious folly to be speculating that such a patient was reliving past memories just before death. Status epilepticus is a life-threatening seizure of particularly long length. Apneustic respirations are a kind of gasping suggesting death is very near. Twelve seizures would have produced a "witch's brew" of brain signals showing up on EEG readings, and from such a thunderstorm of brain signals nothing reliable can be inferred about what a patient was thinking or recalling. Since the patient was in a coma and plagued by a dozen seizures that disrupt mental processes such as recollection if it is occurring, it makes no sense at all to speculate that the patient was thinking about or recollecting anything.

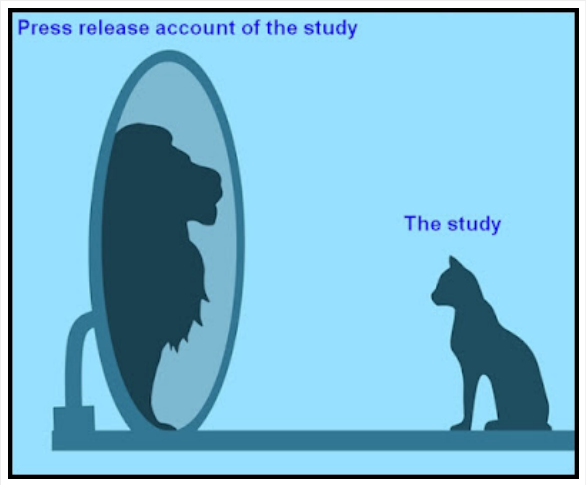
Giving us a headline as phony as the headline quoted above from the Independent, the Daily Mail gives us this fake news headline about this patient: "Our lives really DO flash before us: Scientists record the brain activity of an 87-year-old man at the moment he died, revealing a rapid 'memory retrieval' process." This headline is as phony as a three-dollar bill. Zero evidence has been provided in the scientific paper of any memory retrieval around the time of death, and the patient's condition gives the strongest reason for disbelieving that any such thing was occurring. A similar fake news headline occurs on www.bbc.com, showing that once an expert lights a fake news match, the fake news fire will spread even to sources the average person regards as having high journalistic standards.

- binary memory storage theory
- biotech industry influence on neuroscience
- brain abscess
- brain changes with age
- brain collections
- brain connectivity
- brain cyst
- brain effect on personality
- brain imaging
- brain injury
- brain physical shortfalls
- brain research projects
- brain shortfalls
- brain signal speed
- brain size and intelligence
- brain surgery
- brain tumors
- brain uploading
- brain waves
- calendar calculator
- CAMKII
- CBC theory
- chemical imbalance theory of mental illness
- citation errors
- citation of low-quality research
- claim of Jennifer Aniston cell
- claims of brain localization
- claims of chromatin involvement in memory
- claims of concept cells
- claims of concept-selective regions in the brain
- claims of epigenetic encoding of memory
- claims of mind reading by brain scans
- claims of neural correlates of love
- claims of neural correlates of memory activity
- claims of neural correlates of mental activity
- claims of neural representations
- claims that brains think
- clairvoyance
- conscious cells theory
- consciousness
- consciousness shadow-speaking
- corporate funding of neuroscientists
- COVID-19
- cryo-EM
- Darwinism

There is an abundance of reliable evidence that people have extraordinary near-death experiences after their hearts have stopped. Such experiences often include what are called life-review experiences, in which a person may recall important moments from his life. Neuroscience has done nothing to explain such near-death experiences.

The fact of such experiences is a major reason for rejecting all claims that human consciousness is a product of the brain, and that memories are stored in brains. According to such claims, no one should have any mental experiences at all other than unconsciousness after his heart stops. Within a few seconds after a heart stops, a brain shuts down its electrical activity. This was shown by the 2017 paper I previously mentioned, "Electroencephalographic Recordings During Withdrawal of Life-Sustaining Therapy Until 30 Minutes After Declaration of Death," Figure 1 of that paper shows EEG readings of four patients for thirty minutes after their hearts stopped. The readings are flat lines, except for three or four little blips that can be compared to momentary muscle twitches of a corpse a few minutes after death. The Zemmar study does nothing to challenge ideas that brains promptly shut down as soon as a heart stops.

On the same day that we had the fake news headlines quoted above, we had another fake news headline, one that declared, "New project creates digital clones of human brains to help treat neurological disorders." No one has created any such thing as a digital clone of the human brain. We can also be quite confident that no one ever will do such a thing, because the act of measuring all of the synapse states and neuron states of a brain would inevitably kill a person, or require the cutting away of so much tissue that you would never be left with a clone of the person's original brain state. In the text of the story we read that the work being done is merely the creation of some "virtual model," something not at all a clone of the brain.



Postscript: Vice.com tries to squeeze some more juice out of the fake news story about the dying 87-year-old. It gives us an article with the misleading title "The Search for Meaning in a Mysterious Brain Signal at Death." There was nothing mysterious about the brains signals recorded. There are some good aspects of the Vice.com story. The story quotes a doctor named Chalwa:

" 'They have no idea what that guy is experiencing,' Chawla said. It'd be different if the man survived, and reported that he experienced a recall

- default mode network
- dementia
- dendritic spines
- depression
- distributed recall hypothesis
- DNA
- dreams
- EEG studies
- eidetic memory
- emergence
- emergentism
- engram
- epigenetics
- epilepsy
- ESP
- evolution
- exceptional auditory memory
- exceptional mathematics ability
- exceptional memory
- exceptional multitasking
- exceptional musical memory
- exceptional reading ability
- exceptional recall of facts
- exceptional recall of number sequences
- exceptional recall of text sequences
- exceptional recognition memory
- exceptional speed of memorization
- exceptional speed of thinking
- exceptional time-related ability
- excessive and potentially hazardous brain scanning in neuroscience research
- extent of paranormal experience
- famous neuroscience case histories
- fastest memorizers
- feedback loops
- file drawer effect
- first rule of neural explanation
- fMRI
- free books by Mark Mahin
- free will
- free-exploratory neuroscience technique
- freezing behavior
- frontal lobes
- fusiform face area
- Gadolinium contrast agents
- gaslighting
- genes
- global workspace theory

of memories. But since he died, we have no idea what happened. To say otherwise, 'is frankly appalling,' Chawla said."

Correct -- the behavior of so many people in this matter is truly appalling and unprofessional.

at February 24, 2022 No comments:

Labels: near death experiences, science journalism

Monday, April 2, 2018

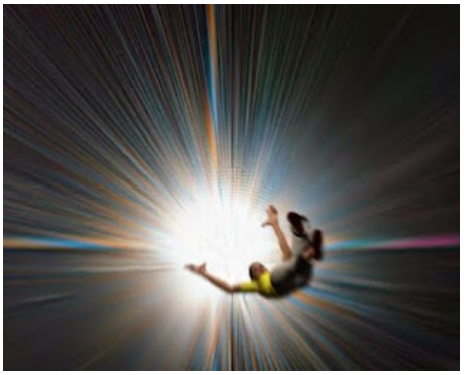
The Many Cases Showing a Person's Mind Can Operate When His Brain Has Shut Down

The dogma that our minds are produced by our brains is a dogma that makes some very definite predictions. One prediction of such a dogma is that human mental activity should completely stop both after someone dies and after someone's brain shuts down. During cardiac arrest, a person will “flatline.” Not only will his heart stop beating, but his brain waves will also stop within 2 to 20 seconds after his heart stops. This means the brain has stopped working. Unless the person is revived through medical resuscitation efforts, he will die.

Experimental results on the cessation of brain electrical activity after heart stoppage are summarized on page 28 of this document. There we are told that Hossmann and Kleihues in 1973 tested with 200 cats and 21 monkeys, and found that EEG (a measure of the electrical activity in the brain) became "isoelectric" (in other words, a flat line) within 20 seconds following the stop of blood to the heart. We are also told that a result of the brain flat-lining within 15 seconds was produced in 1991 with 37 dogs (Stertz et. al.), with 143 cats (Hossmann, 1988), and with 10 monkeys (Steen et. al. 1985).

But contrary to the predictions of the dogma that minds are produced by brains, it is often found that mental activity continues after both the heart and the brain have shut down. Such events are called near-death experiences.

Near-death experiences first came to public light in the 1970's with the publication of Raymond Moody's book *Life After Life*. Patching together elements from different accounts, Moody described an archetypal typical near-death experience, while noting that most accounts include only some elements in the described archetype. The archetype NDE included elements such as a sensation of floating out of the body, feelings of peace and joy, a life-review that occurs very quickly or in some altered type of time, a passage through a tunnel, an encounter with a being of light, and seeing deceased relatives.



- gnostic cells
- groupthink
- health hazards in neuroscience experiments
- hemispherectomy
- high mental function despite large brain damage
- hippocampus
- how to detect bad neuroscience
- HSAM (Highly Superior Autobiographical Memory)
- Human Brain Project
- hydrocephalus
- hyperlexia
- hyperscanning
- hyperthymesia
- hypnosis
- idea creation
- idealism
- imagination
- inappropriate neuroscience prize awards
- informed consent
- instincts
- integrated information theory
- intelligence after brain injury
- intelligence of animals with small brains
- interbrain synchrony
- IQ increase after brain tissue removal
- IQ increase after hemispherectomy
- keep-torturing-the-data-until-it-confesses tactics
- lack of corpus callosum
- lack of neural correlates of thinking
- lack of progress in cognitive neuroscience
- life review
- longtermism
- loss of cerebellum
- loss of corpus callosum
- loss of frontal lobes
- loss of half of brain
- loss of left half of brain
- loss of most of brain
- loss of right half of brain
- loss of temporal lobe
- low connectivity of brains
- low statistical power in neuroscience experiments
- LTP
- M. Mahin autobiographical sketch
- materialism

A study on near-death experiences was published in the British medical journal *The Lancet* in 2001. The study interviewed 344 patients who had a close encounter with death, generally through cardiac arrest. 62 of those reported some kind of near-death experience. 15 reported an out-of-body experience, 19 reported moving through a tunnel, 18 reported observation of a celestial landscape, 20 reported meeting with deceased persons, and 35 reported positive emotions.

The AWARE study was published in 2014 in the journal Resuscitation. It was entitled, "AWARE—AWAreness during REsuscitation—A prospective study." The URL can be found here.

The AWARE study name is an acronym for *awa*reness during *re*suscitation – the type of resuscitation that takes place when a person has a heart attack (cardiac arrest) and almost dies. The study collected data at 15 different hospitals, and was carried on over the course of four years. The study attempted to gather accounts of people's recollections in hospitals after they had very close encounters with death, typically during a heart attack or cardiac arrest. Over 2000 cardiac arrest cases were studied, and there were only 330 who survived to leave the hospital. Of those 330, only 101 met eligibility requirements, agreed to be interviewed, and also agreed to "stage 2" interviews.

So the study ended up with a group of only 101 persons who had experienced a close encounter with death, generally because of a cardiac arrest. Of this pool of 101 persons, 22% answered "Yes" to the question, "Did you have a feeling of peace or pleasantness?" 13% answered "Yes" to the question, "Did you feel separated from your body?" 13% answered "Yes" to the question, "Were your senses more vivid than usual?" 8% answered "Yes" to the question, "Did you seem to encounter a mystical being or presence, or hear an unidentifiable voice?" 7% answered "Yes" to the question, "Did you seem to enter some other, unearthly world?" Only 3% answered "Yes" to the question, "Did you see deceased or religious spirits?"

These results are corroboration of published accounts of what typically happens in a near-death experience, although the numbers are smaller than those reported in the Lancet study. As discussed here, the AWARE study does quote one respondent who gives an account very much like what has been published in previous books on near-death experiences:

I have comeback from the other side of life. ..God sent (me) back,it was not (my) time — (I) had many things to do. ..(I traveled) through a tunnel toward a very strong light, which didn't dazzle or hurt (my) eyes. ..there were other people in the tunnel whom (I) did not recognize. When (I) emerged (I) described a very beautiful crystal city. .. there was a river that ran through the middle of the city (with) the most crystal clear waters. There were many people, without faces, who were washing in the waters. ..the people were very beautiful. .. there was the most beautiful singing. ..(and I was) moved to tears. (My) next recollection was looking up at a doctor doing chest compressions.

While the AWARE study did not find a very large number of cases of near-death experiences, the study did "hit the jackpot" in regard to one case of a 57-

- mechanistic biology
- memory after brain injury
- memory encoding
- memory maintenance
- memory recall
- memory storage
- mental focus
- mental illness
- methylation theory of memory storage
- microscopic analysis of brain tissue
- microtubules
- mind over matter
- mind uploading
- misleading visuals in brain imaging papers
- misstatements about neuroscience case histories
- molecular machinery
- morphogenesis
- Morris water maze
- multiple copies of a memory theory
- narrowness of neuroscientist studies
- natural selection
- near death experiences
- network neuroscience theory
- neural noise
- neuron nicknames
- neuroscience blogs
- neuroscience research endangering patients with brain problems
- neuroscientist confessions
- neuroscientist hand-waving
- neuroscientist pareidolia
- noise-mining
- non-local consciousness
- nonneuralism
- novelty preference technique
- opinion poll of neuroscientists
- optogenetics
- orchestrated objective reduction theory
- origin of biological complexity
- origin of man
- origin of Mind
- origin of minds
- out-of-body experiences
- overblown hype
- pain insensitivity
- panpsychism
- paranormal phenomena
- patient H.M.

year-old patient who said that he floated out of his body while being revived from his cardiac arrest. The man said that a woman appeared in a high corner of the room, beckoning him to come up to her. He said that despite thinking that was impossible, he found himself up in the high corner of the room, looking down on the medical team trying to revive him. The man described specific details of the revival efforts, including the presence of a bald fat man with a blue hat, a nurse saying, "Dial 444 cardiac arrest," his blood pressure being taken, a nurse pumping on his chest, a doctor sticking something down his throat, and blood gases and blood sugar levels being taken.

Here is what the AWARE scientific paper said in regard to the accuracy of these recollections:

He accurately described people, sounds, and activities from his resuscitation...His medical records corroborated his accounts and specifically supported his descriptions and the use of an automated external defibrillator (AED). Based on current AED algorithms, this likely corresponded with up to 3 minutes of conscious awareness during CA [cardiac arrest] and CPR.

So here is a man who had a heart attack, and should have been unconscious during the medical efforts to revive him. Instead he accurately describes the details of what happened. Moreover, he claims that he observed these details while in a position above his body, in the high corner of the medical room. What we have here is what seems like a good-as-gold vintage "out of the body experience," one with details that have been verified. This is an example of what is called a veridical near-death experience – one with observations that were subsequently verified.

In terms of its credibility and evidential value, the case may rival the famous Pam Reynolds case. At the time of her brain operation, the late Pam Reynolds was a 35-year old who had a large brain aneurysm. She underwent a very complicated operation that involved pumping out her blood and chilling her body temperature to only 60 degrees. Some twenty medical personnel worked on the complex operation.

After the successful operation was over, Reynolds reported having a near-death experience during the operation. She reported floating out of her body, and witnessing her operation. She accurately reported details of some medical equipment that was used to cut her skull open, describing it as a "saw thing...like an electric toothbrush," with "interchangeable blades" that were stored in "what looked like a socket wrench case." She reported someone complaining that her veins and arteries were too small. These details were later verified. This was despite the fact that during the operation Reynolds eyes were covered throughout the operation, and her ears were plugged with earplugs delivering noise of 40 decibels and 90 decibels (not to mention that her body was chilled to a level at which consciousness should have been impossible).

Reynolds said that she then encountered a tunnel vortex, saw an incredibly bright light, heard her deceased grandmother calling her, and encountered several of her deceased relatives. Reynolds says she was told by her uncle to go back through the tunnel, and to return to her body. These details were originally reported in the 1998 book *Light and Death* by Michael Sabom MD.

- patient K.C.
- pharmaceutical industry influence on neuroscience
- philosophy
- philosophy of biology
- philosophy of mind
- Phineas Gage
- photographic memory
- physical shortfalls of all brains
- physicalism
- PKMZ
- PKMzeta
- place cells
- post-hypnotic amnesia
- pre-1975 near-death experience
- pre-1975 out-of-body experience
- precognition
- predicting intelligence from brains
- predicting psychology from brains
- predictions
- prefrontal cortex
- preservation of learned knowledge after hemispherectomy
- preservation of learned knowledge after loss of much of brain
- preservation of learned knowledge in animals after brain tissue loss
- protein turnover
- psychiatric mudslinging
- psychiatry
- psychical research
- quantum mechanics
- questionable research practices
- recall of 50-year-old memories
- recall of long texts
- recommended books
- redundant memory storage
- relative ease of getting a neuroscience PhD
- reliable techniques for measuring recall in rodents
- remote viewing
- replication crisis
- research abuse of epileptics
- savants
- science academia resemblance to organized religion
- science journalism
- scientific consensus
- scientific fraud
- scientist misconduct
- sequential traversal of neurons

That book includes diagrams of the medical equipment used to cut open Reynold's skull. They match her descriptions very well.

Many people have heard of one or two of these veridical near-death experiences, perhaps the Pam Reynolds case or the often-told story about "Maria's shoe." But judging from the book *The Self Does Not Die: Verified Paranormal Phenomena from Near-Death Experiences,* these veridical near-death experiences may not be so rare. Below are some of the cases documented in that book.

Case 2.1: A dying cancer patient remarked to Ricardo Ojeda-Vera (a doctor's assistant) that he had written a beautiful letter to his mother. Ojeda-Vera had written such a letter. The patient "described in detail exactly what he had written," and accurately recounted that he had worn a green bathrobe while writing the letter. The patient claimed to have seen Ojeda-Vera writing the letter while she had "looked down on him from the ceiling." Three days later the patient died.

Case 2.2: A patient reported having an out-of-body experience (OBE) during a cardiac arrest, and reported seeing a penny on the top of a cabinet. The cabinet was checked, and a penny was found there.

Case 2.3: In this well-known case, a woman named Maria reported floating out of her body during a cardiac arrest, and that during such an experience she saw a dark blue tennis shoe on a ledge near a window on the third floor. A search found such a shoe in such a location.

Case 2.5: At a hospital a woman who had a cardiac arrest reported having an out-of-body experience during which she floated out of her body, and saw a 12-digit serial number on the top of a six-foot tall respirator. The respirator was later checked and found to have exactly that number on its top.

Case 2.6: A man reported having an out-of-body experience during which he observed a 1985 quarter atop an 8-foot-high cardiac monitor. The top of the monitor was checked, and a 1985 quarter was found on its top.

Case 2.8: A man reported having an out-of-body experience during which he observed medical workers putting defibrillation paddles on him and gel. This matched his actual medical experience during his cardiac resuscitation.

Case 2.11: a woman reported floating out of her body during a cardiac arrest, and that during such an experience she rose up through the hospital's floors, rising up above the roof, where she saw the skyline and a red shoe. A search of the hospital's roof found a red shoe on the roof.

Case 2.12: A man reported that during his cardiac operation he floated out of his body and returned to his home, where he saw a caretaker having sex there with his girlfriend. The caretaker admitted this had happened.

Case 2.13: A woman reported that during her operation she floated out of her body and saw doctors telling her family (incorrectly) that she had died. It was later confirmed that the family had been told that.

- sharp wave ripples
- short lifetime of synapses
- short lifetimes of brain protein molecules
- short lifetimes of dendritic spines
- simulation hypothesis
- so-called psychiatric brain surgery
- sociology of science
- source of thoughts
- speed of human minds
- speed reading
- Spiritualism
- split-brain operation
- stem cells
- strokes
- synapse theory of memory
- synapses
- synaptic mapping
- synaptic plasticity
- synaptic turnover
- T-maze
- teleospiritism
- telomeres
- terminal lucidity
- top-down theory of mind
- transhumanism
- transposition of senses
- traumatic brain injury
- unnecessary brain scans
- unreliability of synaptic transmission
- unreliable neuroscience techniques
- vaccines
- videos
- visual recognition
- Y-mazes

Case 2.14: A woman reported having a near-death experience in which she looked down at her body from a corner of a hospital room during her operation. She then reported seeing in a paranormal way two of her grandmothers saying in a cafeteria that they were going to have a cigarette, even though neither smoked. It was confirmed that this improbable thing had happened.

Case 2.15: A patient in the intensive care unit of the hospital had a near-death experience in which he was reportedly able to hear the conversations of relatives elsewhere in the hospital, such as a waiting room conversation about a green toy tractor knocking down a wall of toy bricks. The conversations had occurred far away from his location in the hospital.

Case 3.1: A woman put under general anesthesia during her operation reported details of her operations from an "on the ceiling" perspective, and also correctly reported details of an operation in the adjacent operating room, such as the amputation of a leg and its placement in a yellow bag. She made the report as soon as she woke up, and had no way of knowing such information.

Case 3.7: A man missing his dentures correctly reported a nurse putting them in the drawer of a cart during his cardiac resuscitation, when he should have been completely unconscious.

Case 3.8 A man reported a near-death experience during cardiac arrest. He reported that during the medical efforts to revive him, he saw that a nurse dropped a tray and was scolded about it by a doctor. The account was confirmed.

Case 3.9 A woman had a near-death experience during cardiac arrest. She reported hovering in a corner of the room near the ceiling, and noticed a rose-shaped hair clip and a bottle breaking, details she should have been unaware of. The details were accurate.

Case 3.10 A patient unconscious during his operation reported floating above his body, and accurately described details of his operation.

Case 3.11 This dramatic near-death experience account is told in the youtube.com interview here. A patient was written off for dead, and had no vital signs for "close to 20 minutes." During that time he had "no heart beat, no blood pressure, no respiratory function." But then in a seemingly miraculous manner the patient's vital signs reappeared, and he eventually "recovered fully." The patient described a near-death experience in which he observed post-it notes in the operating room that he should have been unable to observe because his eyes were taped and he was unconscious. The details were accurate.

Case 3.12 A patient whose heart was stopped reported a near-death experience in which he heard some paramedic say something to the effect that the patient would never revive, but a rookie paramedic could use the patient to practice CPR. After undergoing an amazing recovery, the patient told what he had heard to one of the paramedics, who was amazed that the man had apparently heard what the paramedic had said.

Case 3.16 Medical staff tried to save a patient who had undergone cardiac arrest, and they decided to stop the resuscitation efforts. They later found a faint pulse, and resumed the revival efforts. The man survived, and described the medical efforts trying to revive him. He “got all the details right, which was impossible” because he had no pulse during such efforts.

Case 3.18 A man who had a cardiac arrest during an operation reported to his doctor that he had seen a brown leather key fob fall out of the doctor's pocket during the operation. The doctor confirmed that such a thing had happened, at a time when the patient should have been unconscious.

Case 3.29: This case is the famous Pam Reynolds case, which I discussed above. While having her senses blocked and her temperature dramatically lowered during an operation that should have guaranteed unconsciousness, Reynolds reported a near-death that included very specific details of her operation she should have been unaware of.

Case 3.30: A boy who underwent cardiac arrest recalled that during the medical efforts to revive him he "had been up in a corner of the room and had looked down on his body." He correctly recalled several details of the procedure.

Case 3.33: A man who underwent cardiac arrest reported an out-of-body experience in which he felt himself "rising up through the ceiling" and then seeing some hospital area in which there were mannequins. Above the ICU he was in was a CPR training area in which there were dummies (resembling mannequins) used for CPR training.

There are many other similar accounts in this compelling and well-documented book, which I recommend. The book documents all the original sources of these accounts.

Such accounts present two great difficulties for anyone claiming that these near-death experiences were just hallucinations. The first difficulty is accounting for the similarity of the accounts. Many times in the book we hear accounts of people who said they floated out of their bodies and watched their operations or medical resuscitation attempts from a corner of the hospital room or the ceiling of the room. Why should such a narrative element occur so often in hallucinations, which we would expect to have only random content? The second difficulty is explaining the accurate details in such accounts. To deal with that, the skeptic may tie himself in knots, telling us nonsense such as the suggestion that someone might record perceptions while he in unconscious, and then play them back in his mind when he awakes. No such ability of humans has ever been proven.

Such near-death experiences may or may not prove that you are destined to live forever after you die. But the veridical near-death experiences provide very good evidence that the human mind can continue to operate well after the brain has shut down, as a brain does during cardiac arrest. Such a thing is of decisive importance to the matter being investigated by this site. If a mind can continue to operate well after a brain has shut down, that is decisive evidence against the idea that the mind is merely something produced by a brain. Traditional dogmatic claims that the mind is a product of the brain are refuted by the cases discussed in this post.

If you do a Google search to research how soon the brain shuts down after the heart stops, you will find several articles claiming that the brain continues after the heart stops. But these stories are based not on brain wave readings, but on near-death experiences. What's going on is that the writer hears accounts of people experiencing near-death experiences after the heart has stopped, and then reasons, "So, his brain must have still been working." But the evidence is clear: the brain shuts down and brain waves "flat line" within a few seconds after the heart stops. Near-death experiences are cases of the mind continuing after the brain has stopped working.

A Google search may find various news reports of a single study that found a brain operating a few minutes after someone died. But that case is a fluke that was probably a false reading issue, and the type of brain wave found was only a delta wave (the type that people have during deep sleep). Near-death experiences don't have a faint dream-like quality. A study done by seven scientists found that the memories of near-death experiences are even more vivid than regular life experiences, and that therefore such near-death experiences "cannot be considered as imagined event memories."

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